

The



CHEMIST AND DRUGGIST

For Retailer, Wholesaler and Manufacturer

APRIL 22 1961

Another successful season lies ahead...



**BANK
ON
BARTEX
Superlens
AGAIN!**

Proved the best sellers . . .
last year's triumphant range enhanced
with exciting new styles

Bartex
Superlens
SUN GLASSES



MASSIVE NATIONAL
AD. CAMPAIGN
BREAKS MAY 11th.

My mummy insists on

MODERN
teats
made by
CANNON
-naturally!



Wise mother! She knows there will be no feeding time temperament because CANNON Modern teats never put a baby off his feed. She can choose from three flow sizes the one that suits her child's preferred rate of feed. All CANNON teats have triple perforation to ensure even, air-free flow, and spiral reinforcement to prevent softening or collapse of the rubber. And CANNON teats last longer meaning fewer new ones to 'break in' — try them and see

This is
the
CANNON
baby...

appearing
in the mass
NATIONAL PRESS
CAMPAIGN

7½d. from all
chemists & clinics

CANNON
MODERN
ANTI-COLIC TEATS
FOR NEAREST TO
NATURAL FEEDING

ROAD, TOTTENHAM, LONDON, N17



This year's CANNON campaign will be seen in the National Press, Women's Magazines, Radio and TV Times and in the Baby Publications.

The advertisements will emphasize all the unbeatable qualities that make Cannon feeding 'nearest to natural' and end the feeding time temperament common with inferior products.



Supporting your sales of
CANNON MODERN Anti-colic Teats
The preferred baby teat today!

ORDER NOW TO ENSURE AMPLE SUPPLIES!

The CHEMIST AND DRUGGIST

Volume 175

APRIL 22, 1961

No. 4236

Television Advertising PRIOR CHECK ON ALL MEDICINES

THE following statement was issued by the Independent Television Companies Association, Ltd., on April 17, with regard to the advertising of proprietary medicines:

"There has recently been some critical comment about television advertisements for proprietary medicines and the independent television companies think it may be of general interest to explain the careful steps taken to ensure that all advertisements comply with the "Principles for Television Advertising." All advertisements are carefully scrutinised and checked . . . and whenever there is any doubt about the validity of specific claims they are referred to specialist advisers. Medicinal advertisements are submitted to the Association's medical adviser, who was nominated by the British Medical Association and who is a Fellow of the Royal College of Physicians and a senior consulting physician at a London teaching hospital. In certain cases a "second opinion" is sought from specialists in various fields of medicine. The television companies also have at their disposal the services of a dental consultant, a well-known analytical chemist and an eminent specialist on food and nutritional values. . . . The majority of proprietary medicine advertisements have in the past been referred to the programme companies' advisers and only in a very few cases has it been found that the claims in an advertisement could not be substantiated or in some other respect did not comply with the rules. Nevertheless, to ensure complete accuracy, the programme companies have now decided to obtain expert medical advice on *all* advertisements for proprietary medicines, whether they are new or have been previously shown."

Oral Polio Vaccine

MINISTRY DECIDES AGAINST RELEASE

A TWO-HOUR discussion between officials at the Ministry of Health and Dr. R. H. Leader, medical officer of health for Ipswich (scene of the latest outbreak of poliomyelitis) on April 18, resulted in a decision not to release supplies of oral polio vaccine for mass immunisation of the town's inhabitants. The Ministry pointed out the long-term value of the Salk injection, which was being well accepted in the town, and explained the complicated procedure that would be involved in carrying out emergency immunisation on such a large scale with the oral preparation.

A Ministry spokesman had stated on the previous day that use of oral vac-

cine in the way recommended by the Joint Committee on Poliomyelitis Vaccine was to provide a temporary protective barrier against the spread of an epidemic. "It can only do this job if it is given within a few days to a large proportion of the population of the area affected." An assurance that an adequate quantity of oral vaccine was available for immediate use if such an epidemic arose merely confirmed a statement issued earlier by The Wellcome Foundation, Ltd.

A problem in handling the oral preparation is that prior to reconstitution it must be stored at a temperature of -20°C . or lower. When required for use, the contents of a container are allowed to thaw just to melting point and an appropriate quantity is withdrawn using aseptic precautions; the remainder is then again frozen. It is recommended that concentrated thawed vaccine should be diluted with a buffered saline solution before use. Diluted vaccine may be kept for up to a week, provided storage temperatures do not exceed 4°C . A quantity of the dilute vaccine so small as 0.1 mil has been found a satisfactory dose, which may be given in a little syrup.

The immediate protective effect of the oral vaccine is attributed to its ability to produce local intestinal re-

sistance to other, pathogenic, polio viruses. A single dose of a particular strain may be used as an emergency measure, but more complete cover and a prolonged effect may be obtained by the sequential feeding of each of the three virus types at six-weekly intervals, or by administration of a mixture of all three types on two occasions ten or more weeks apart.

Whitley Council

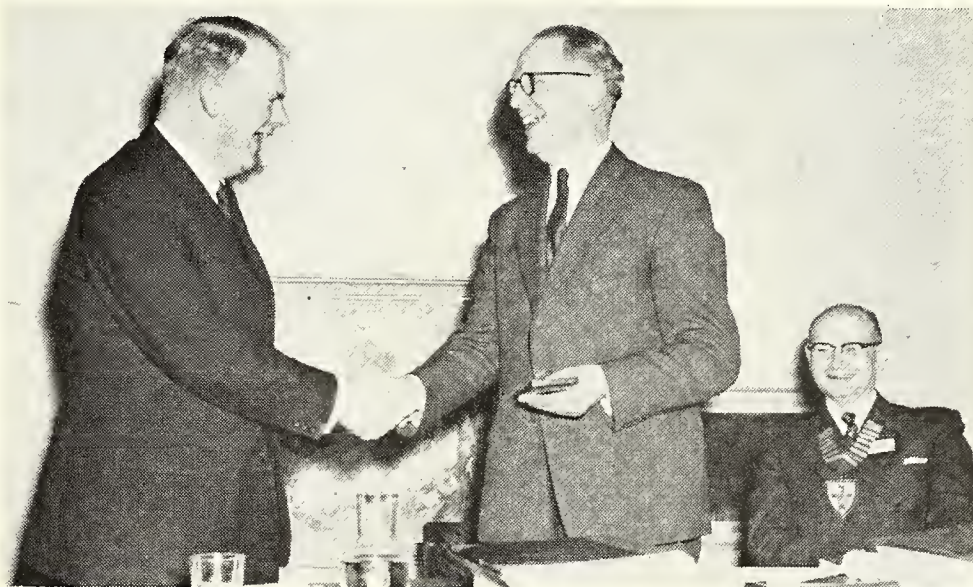
EVENING MEAL ALLOWANCE

AN evening meal allowance of 3s. 9d. payable to National Health Service staff who work late at night in addition to ordinary day duty has been agreed by the General Whitley Council. The arrangements do not apply to staff within the purview of the Ancillary Staffs Council. The allowance is not payable to those whose conditions of service envisage it as normal for them to be on call at night or staff "whose late duties begin or end at a time when they could reasonably be expected to take a main meal at home."

Cancer Fund

NEW RESEARCH CENTRE FOR LONDON

THE most advanced cancer research centre in Europe, housing laboratories costing over £1 million, will be in operation at Lincoln's Inn Fields, London, by July 1962, according to a statement by Sir Cecil Wakeley at the annual meeting of the Imperial Cancer Research Fund on April 18. Speaking as chairman of the fund, Sir Cecil said the centre should "make a powerful contribution to the intensive war being waged against the disease."



Mr. J. H. Wood (centre) receives the Evans medal from Mr. C. W. Robinson (director, Evans Medical, Ltd.) (see p. 402).

The Budget

CHANGE IN TAXATION AND REVENUE

TO restrain the growth of consumption, continue to encourage investment, leave room for increased exports and provide additional incentives to effort and initiative was how the Chancellor of the Exchequer (Mr. Selwyn Lloyd) described the objects of his first Budget which he introduced to Parliament on April 17. The following are among the proposed changes affecting businessmen.

Income Tax: The general flat-rate allowance for income tax for National Insurance contributions to be increased for adult employees from £15 to £18 to take account of the pension element of the increased contributions introduced since the last Budget. For others an increase of £3 is proposed and for juveniles an increase of £2.

Surtax: Income at which surtax begins will be raised from £2,000 to £4,000 a year for earned income but as the earned income allowance will be deductible in computing income for surtax, the surtax will not be payable until about £5,000 or more—applicable for 1961-62 tax assessments, payable January 1, 1963.

Profits Tax: Profits tax is raised by 2½ per cent. to 15 per cent., operating from April 1. Capital allowances for ordinary motor cars used for business limited to a maximum of £2,000 for any one vehicle.

Stamp Duties: The present *ad valorem* stamp duty on bills of exchange and promissory notes will be replaced by a fixed duty of twopence from August 1.

Hydrocarbon Oil: A duty on fuel and gas oils and kerosene of twopence per gallon is imposed.

Motor Duties: Licence duties on private cars increased from £12 10s. to £15 a year with similar increases for other vehicles effective immediately.

Television Advertising: A 10 per cent. duty on the cost of advertisements in television programmes.

Further Powers Sought: The Chancellor is to take powers enabling him at any time to raise or reduce purchase tax and all the main Customs and Excise revenue duties by a maximum change in either direction of up to 10 per cent. of existing charges. Protective duties are not involved.

Power is also to be taken to impose an "at any time" surcharge on employers up to a maximum of 4s. a week per employee.

Holiday Rotas

BIRMINGHAM COMMITTEES TO MEET

BIRMINGHAM Health Committee on April 14 appointed three representatives to meet the Executive Council about opening times of dispensing chemists in the area. The Executive Council had rejected suggestions of the Health Committee that dispensing hours should be extended from 7 p.m. to 8 p.m. in winter and a fuller rota system introduced at bank holidays. Last month the Health Committee decided to make representations to the Minister of Health, but these have now been deferred until after the meeting between the two bodies on May 19. Alderman W. T. Bowen (chairman of the Health Com-

mittee), who complained after people queued at a city centre chemist's shop at Christmas, said that the meeting was being called as a result of a letter he had received from Dr. A. Beauchamp (chairman of the Executive Committee); "I hope that, as a result, we can arrive at an understanding of what may need to be done," Alderman Bowen said. While deciding that no major changes should be made the Health Executive Council agreed to midday and evening rotas on the third day of any public holiday.

Public Pharmacists

MEETINGS OF GUILD

AT the thirty-eighth annual meeting of the Guild on April 15, Messrs. W. G. Smith, C. H. Preston Robinson, E. J. Fitchett and J. C. Barfield and Miss M. C. Islip were elected ordinary members of council. With Messrs. T. D. Clarke, H. S. Grainger, W. Mott, S. Powlson and G. Raine, and the district members: Messrs. J. Morrison (Scottish); N. W. Blacow (North-eastern); B. H. Smith (North-western); F. W. Sambidge (Midland); E. George (South-western); and J. W. B. Fish and D. F. Smith (South-eastern), they constitute the council for 1961-62. The meeting made certain changes of rule governing associate membership and instructed the council to go forward with plans to seek a revaluation of salary scales.

A meeting of the council held on April 13 considered the International Hospital Equipment Exhibition at Olympia during the week of which (at 5.15 p.m. on May 17) the research and planning committee of the Guild is organising a meeting. It is hoped that the reprinted and enlarged edition of "Hospital Pharmacy Planning" will be available at that date; the price will be 5s. 6d. The council is advising its members that no deviation from the statutory prescription charge may be made in hospitals, as the prescription charge is a tax and not a payment for medicines, and as the advice given by the Minister of Health to suggest that patients should buy items costing less than 2s. was given specifically to retail pharmacist contractors.

The council referred to the Hospital Pharmacists' Consultative Committee for official guidance on the question of what attitude to adopt to requests for information by market research organisations. It was reported that "Dartford Weighting" now applies to pharmacists' salaries. Claims for a salary allowance (retrospective), on the same basis as the present Group Pharmacist allowance, for sole Chief Pharmacists serving a group of hospitals, and for an increased London weighting, have been received by the management side of the Whitley Council, committee C.

Statutory Committee

AN INQUIRY TO BE RESUMED

THE Statutory Committee of the Pharmaceutical Society is to meet at 17 Bloomsbury Square, London, W.C.1, at 2.45 p.m. on May 3 to consider information and evidence from which it appears that a member of the Society has been convicted on a charge of embezzling cash from his employers.

Agricultural Chemicals

RECOMMENDATIONS FOR SAFE USE

A NEW complex of zineb and polyethylene thiuram disulphide has been considered by an Advisory Committee of the Ministry of Agriculture, which has recommended that the preparation need not be included in the Agriculture (Poisonous Substances) Regulations. Use of the product is not considered likely to cause a hazard to operators provided they avoid unnecessary contact with, or inhalation of, powder or spray. Distributors are requested to include details of the necessary precautions on their labels. The manufacturers, Boots Pure Drug Co., Ltd., Nottingham, have suggested metiram as a common name for the complex.

IRISH NEWS

THE REPUBLIC

Tipperary Pharmacists

DANCE AT CAHIR

A LARGE gathering of pharmacists and professional colleagues from adjoining counties attended the annual dinner and dance of the Tipperary Pharmacists' Association in Cahir on April 6. Mr. Patrick Joy, Clonmel (chairman) welcomed the guests, who included the president of the Pharmaceutical Society of Ireland, and Mrs. Loughman; the registrar (Mr. J. G. Coleman); the president of the Irish Drug Association and Mrs. Hennessy; the former president, and Mrs. McAuliffe; Dr. T. Prendiville (president, South Tipperary Clinical Society), and Dr. Herlihy (president, North Munster Medical Golfing Society). Proposing the toast of the Society, Mr. Coghlan, who welcomed the president and registrar, "both born in co. Tipperary," paid tribute to the work of the Council and its representatives present, in the interests of pharmacy. Replying, Mr. Loughman outlined the Council's activities in recent months, particularly in regard to the new Poisons Bill. The toast of the Irish Drug Association was proposed by Mr. T. Moran and responded to by Mr. Hennessy. Dr. Prendiville, replying to the toast "Our Guests" (proposed by Mr. T. Kennedy), said that, when he was attached to a hospital where one of his colleagues was in charge of the pharmacy, the arrangement was unsatisfactory. Later, when a pharmacist was appointed to the position the improvement was "unbelievable."

THE NORTH

Associates' Section

MONTHLY COMMITTEE MEETING

AT the April meeting of the Committee of the Associates' Section of Ulster Chemists' Association held in Belfast, on April 10, Mr. R. J. Davidson (chairman) presiding, letters of resignation were received from Messrs. H. M. Hamilton and J. Kerr (two past chairmen of the Section). Regret was expressed by all those present. Mr. Kerr had been on the Committee for eight years, and Mr. Hamilton had been a Committee member for four years. The good wishes of all were expressed for their success in the future.

NEWS IN BRIEF

EAST Lancashire chemists helped to publicise the recent "first-aid week" with shop and window displays of first-aid boxes and equipment.

A REVISED edition of the Industrial Relations Handbook has been published by the Ministry of Labour (H.M. Stationery Office, price 5s. 6d.).

THE Ophthalmic Optician and the Dispensing Optician is the title of a revised booklet in the Choice of Careers series. (H.M. Stationery Office, price sixpence.)

THE seat for Accrington North on Lancashire County Council has been retained by Alderman W. Brownbill, M.P.S., 70 Avenue Parade, Accrington, after the recent local government elections.

AN urgent request for surgical supplies for a patient in Hammersmith Hospital, London, W.12, was met recently by Baxter Laboratories, Ltd., London Road Trading Estate, High Wycombe, Bucks, with the aid of police patrol cars.

KIRKCALDY, Fife, town council agreed on April 10 to issue a statement protesting against the increase in N.H.S. charges for prescriptions, dentures and spectacles. Copies of the statement were to be sent to the Prime Minister, the Leader of the Opposition, the Minister of Health and Mr. H. P. H. Gourlay, M.P. for Kirkcaldy.

THE Waverley gold medal essay competition is being sponsored for the ninth year in succession by *Research*, 88 Kingsway, London, W.C.2. A prize of £100 and two of £50 are to be awarded for essays of about 3,000 words describing a new project or practical development in pure or applied science. Closing date for entry is July 31.

AYLESBURY Trades Council has written to the local Chamber of Commerce asking whether it would be possible for more than one chemist to remain open in the evenings. The request stems from complaints that during the recent influenza epidemic some patients attending late clinics were unable to get their prescriptions made up until the following morning.

THE list of prescribed industrial diseases has been extended to include ocular ochronosis due to exposure to quinone or hydroquinone. A person contracting the disease at work will be covered for the benefits of the Industrial Injuries Scheme from April 28. That is the effect of the National Insurance (Industrial Injuries) (Prescribed Diseases) Amendment Regulations 1961 (H.M. Stationery Office, price three-pence).

WITH the object of interesting younger members of the profession in the activities of the pharmaceutical organisations; three representatives addressed final year students at the School of Pharmacy, City Technical College, Liverpool, on April 13. Mr. W. G. Fowler spoke on the Liverpool School of Pharmacy Old Students' Association, Mr. C. Leigh on the N.P.U. and Mrs. E. Leigh on the Liverpool Chemists' Association and branch of the Pharmaceutical Society.

TOPICAL REFLECTIONS

By Xrayser

More tribulation

The lot of the physician has not been made easier by the publication of the recent report of the "Cohen" Committee. The conscientious doctor, who takes his duties seriously—the singular in this case is not to be taken too literally—will have to take time off from the desirable pastime of keeping his therapeutics up to date, and turn his attention to the complicated task of memorising the new classification of drugs. It would never do if he were to excuse himself to his patient immediately before writing his prescription in order that he might refresh his memory as to the category into which his treatment fell. Such reference might impair the patient's confidence in the prescriber. The question as to whether the preparation may or may not have exact unbranded equivalents is not one for that precise moment. That is all by the way, for pharmacy has its own problems, and no purpose is to be gained by shouldering the burden of the general medical practitioner. There is, of course, quite a problem for pharmacy contained in the report. It becomes almost impossible to give a satisfactory service under conditions which are so unstable. It is no time since the statement of Mr. Enoch Powell on the increased prescription levy upset the calculations on which the Contractor's remuneration was based. Now, by the advice of an expert committee, a large number of expensive preparations, taken into stock by pharmacists in order to meet a demand on prescription, may find themselves occupying a shelf in company with syrup of pale roses, tincture of chiretta, tincture of sumbul, and stavesacre ointment. One of the recommendations of the Gillebaud Committee was that the Health Service needed a period of stability. From the time that wise observation was made, we have been subjected to earthquakes, tidal waves and upheavals. If as little attention were paid to the new Cohen report as to that of Gillebaud, we would have little cause for alarm, but one feels that the findings of the Cohen Committee, in the recent report, will be more to the taste of the Government than those of the earlier report.

The Iatro-mechanical school

Having given some general impressions of first reactions to the report of the Standing Joint Committee on Classification of Proprietary Articles on Classification in Category S—for I find that that is what I have been writing about—I should now like to examine one statement in more detail. Paragraph 6(c) states that many admixtures of which indiscriminating prescription could be questioned on therapeutic grounds "combine in a fixed proportion drugs of differing and valuable therapeutic action, whereas the relative amounts should be determined by the individual patient's needs." The justice of that observation has to be admitted at once. The addition of one drug to another inevitably eliminates individual treatment, and when a third is added to the combination in tablet form the patient's particular requirements are still less catered for. It has perhaps been made simpler for the prescriber, but such a "package deal" has not the merit of flexibility, and it has the grave demerit of multiplicity of stocks, to the detriment of the contractor's normal urbanity of manner on occasion.

Broad thinking

I read with the greatest interest your editorial entitled "Liberal Studies and Future Status" (p. 378), and I am pleased to find that the conference of British Pharmaceutical Students has expressed its concern over the dangers of over-specialisation in the prescribed course of study. So much has to be learned about so little these days, that the opportunity for cultural pursuit is reduced to the minimum, and the danger is present, as has been said, of producing a race who are illiterate outside of their own restricted field. Unfortunately, the entrance examinations for many of the professions now involve a still earlier specialisation, so that the final structure is being built on a foundation which is narrower than it used to be. If it is thought impossible to widen the scope of the technological course itself, there is much to be said for basing the entrance on the broadest possible educational lines.

IN PARLIAMENT

BY A MEMBER OF THE PRESS GALLERY, HOUSE OF COMMONS

DURING a debate concerning accidents in the home, LORD CROCK, in the House of Lords on April 12, referred to "beautifully coloured dangerous drugs" and exhibited a glass jar "of coloured things that look like Smarties." He stated "There are twenty-two there and every one capable of killing a child." He said he was aware of the need for differentiation "for the purpose of medical men who have to prescribe recognisable instruments for cure. But these glamorous two- and three-colour drugs are not that at all. It is part . . . of salesmanship." The pills had been provided by "the British Pharmaceutical Society's chief inspector who was glad to make them available because the Society is so worried." The pills were properly prescribed but "the mothers will not get rid of them when they have finished taking their proper doses." The average medicine cupboard in the average home would "frighten the life out of anyone who went in." LORD CROCK continued: "What I am drawing attention to is the over-glamorisation of these drugs."

Purchase Tax

SIR J. DUNCAN asked the Chancellor of the Exchequer whether he was aware that there was a Purchase Tax of 4s. 10d. on a 30s. half-gallon tin of terebene balsam, 6s. 5d. on a 35s. two-gallon drum of foot-rot wash and 6s. 6d. tax on a £2 drum of fluke and worm drench all of which were agricultural medicines for the treatment of sheep; and whether he would exempt from Purchase Tax those and all other agricultural medicines for the treatment of farm animals. MR. A. BARBER (Economic Secretary, Treasury) said he could not anticipate the Budget statement, to which SIR J. DUNCAN replied that the tax increased the cost of the production of food. MR. BARBER: "We will certainly bear that in mind. I would point out that all the medicines . . . terebene balsam, foot-rot wash and fluke and worm drench—qualify for exemption if put up in a non-proprietary form."

Export Credits Guarantee

Radical improvements in the method of financing and insuring British exports through the Export Credits Guarantee Department were announced by MR. REGINALD MAUDLING (President of the Board of Trade) on April 12.

He said that the improvements are in three parts: (1) The scale of charges for medium-term insurance was being reduced by an average of 25 per cent. The biggest reductions would be for cover in markets where the insurance charge was formerly the highest. (2) The E.C.G.D. would in future be allowed to guarantee finance for longer periods than the present maximum of five years; and (3) a new and simplified service was to be provided for the small exporter of consumer goods so long as his turnover in export markets did not at present exceed £10,000 a year.

For a charge of 15s. for every £100 covered an exporter would get a guar-

antee of payment of 90 per cent. of his sales in export markets. He would also avoid accounting difficulties since E.C.G.D. was going to run a scheme for buying credit by instalments. The guarantee would also help the man venturing into export markets for the first time to raise bank finance at more favourable rates.

Poliomyelitis Vaccine

In a written reply to LORD BALNIEL on April 12, MR. ENOCH POWELL (Minister of Health) said the Joint Committee on Poliomyelitis Vaccine had advised that the vaccination programme should continue to employ vaccine administered by injection, and that fourth doses should now be offered to children of primary school age. Arrangements were being made for this to be done during the coming school term. The Committee were studying the information available about oral vaccine and had made an interim recommendation that a stock should be available for emergency use in a community or area

where poliomyelitis became, or showed signs of becoming, prevalent. This recommendation was being implemented.

The Budget

The Chancellor of the Exchequer presented the Budget on April 17 (see p. 394).

Diphtheria Prophylaxis

MRS. J. S. BUTLER was informed by MISS E. PITT (Parliamentary Secretary, Ministry of Health), in a written answer on April 17, that when poliomyelitis was present in a locality it was the normal practice to suspend routine immunisation against other diseases, including diphtheria, in order to avoid any risk of provoking paralysis in a person already infected with poliomyelitis virus.

Drugs and Driving

MR. E. POWELL told SIR WILLIAM BROMLEY-DAVENPORT on April 17, that most drugs which impaired the human ability to drive a motor car were restricted to supply on a doctor's prescription, and it was the doctor's responsibility to warn patients of the risks of driving after taking such drugs.

Correspondence

Letters when received must bear the name and address of the sender, not necessarily for publication. The Editor does not hold himself responsible for the views expressed.

An Undesirable Power

SIR.—On the day following the Budget there was no comment in the Press of the chaos that could follow if the Chancellor of the Exchequer gets the power he is seeking to increase or decrease purchase tax by any amount up to 10 per cent., whenever he feels it necessary to curtail public spending or otherwise. There is no need to remind anyone connected with retail or wholesale trade of the vast amount of work involved in price changes if there were to be a penny or so on or off retail prices. For instance how could any manufacturer include the correct retail price on Christmas coffrets when he has to plan many months in advance. Apparently such price changes could happen several times in a year. Purchase tax is complicated enough in its present form without being liable to fractional increases or decreases due to the available spending power in the country.

F. WIDOCKS & Co., LTD.,
E. J. WIDOCKS, *Managing Director*,
Croydon

"Cohen" Committee

SIR.—In the *Daily Telegraph*, April 14, prominence was given to the recommendations of the Standing Joint Committee on the Classification of Proprietary Preparations (see *C. & D.*, April 15, p. 371). The article stated that if standard drugs were largely substituted the drug bill could be halved. The implications, if those recommendations were accepted, are widespread and serious not only for the patient and the industry but for the retail pharmacist and the medical profession. In the case of the retail pharmacist, if the drug bill was halved, the average net profit per shop would be reduced by about £600 a year and the result would be bankruptcy and unemployment. For the

general practitioner it could be the thin edge of the wedge. His prescribing would be restricted in gradual stages until his "freedom to prescribe" became limited to a Prescribers' Handbook "recommending" a drug for each indication. Of course, the foreword to the handbook would provide the then empty phrase "there is no absolute restriction on the prescribing of any drug. . . ." All should be quite clear about the Ministry's aims. They are first to eliminate the use of trade names, secondly to dictate to doctors their prescribing habits. In achieving those two aims they would gain *de facto* control of the only private sector of the National Health Service.

The Association of British Pharmaceutical Industry is apparently quite perturbed by the J.C.P.'s latest recommendations. If it believes that doctors are going to follow the lead given to the G.P. it should plan its next move now. It should co-opt a top sales promotion executive, with drive and organising ability, from within the industry and give him full authority to act without committee interference. He should be given every co-operation. Members should agree to call a sales promotion truce for one month if circumstances make it necessary. During that month all Press advertising and direct mail booked and all medical representatives should be at the disposal of the A.B.P.I. They should all be used to tell pharmacists and doctors the true facts about the cost of drugs and the implications of the J.C.P.'s recommendations. The short-term aim of this campaign would be to sell the industry to the professions and the longer term to weld all three into an effective unit in order to present a united front to the Ministry.

K. J. KNIGHT,
Shoreham-by-Sea

LEGAL REPORTS

Undertaking "Under Seal"

RECENTLY, F. H. Harrold (Wholesale), Ltd., Wisbech, Cambridgeshire, executed under Seal an Undertaking in favour of Johnson & Johnson (Gt. Britain), Ltd., by which F. H. Harrold (Wholesale), Ltd., undertook to observe the manufacturer's fixed price conditions.

Injunction Granted

IN the High Court, London, on April 11, Morny, Ltd., 22 Wadsworth Road, Perivale, Middlesex, were granted a perpetual injunction against Alex Drug Stores, Ltd., trading as Alex Superstores, Surrey Street, Croydon, Surrey, restraining the defendants from reselling any of the plaintiff's goods except at the fixed retail prices stated in their price lists, in breach of an Undertaking under Seal executed by the defendants, and dated May 12, 1959 (see *C. & D.*, May 30, 1959, p. 576). An order for costs was made against the defendants.

Forged Prescription

AT Northampton Borough magistrates' court recently, Irene Helen Hunter, 68 Henry Street, Northampton, admitted that she had attempted to obtain sixty Dexedrine tablets by means of a forged instrument and that she had forged a National Health prescription with intent to defraud. She was fined £3 for the first offence and £7 for the second and was also ordered to pay £4 4s. costs. Hunter was alleged to have told the police that she committed the offences as she had been taking rather more of the tablets than she should have done, after being "put on Dexedrine by her doctor."

COMPANY NEWS

Last year's figures in parentheses

W. H. LEGAT, LTD.—Mr. Kenneth A. Warren has been appointed joint managing director with Mr. A. Warren.

AYRTON, SAUNDERS & CO., LTD.—Mr. B. C. Lewis (chairman and managing director since 1953) is to retire at the conclusion of the annual meeting on April 21.

CYANAMID INTERNATIONAL CORPORATION.—Mr. C. F. Bonnet (associate regional director for Europe) has been appointed managing director, with headquarters at Zurich.

BARFOS, LTD.—Proposed final dividend at 12½ per cent., makes 20 per cent. for 1960 (against 17½ per cent.). A two-for-three scrip issue in Ordinary shares is also proposed. The group net profit is £149,727 (£148,545), after tax of £150,176 (£148,545) and depreciation £35,064 (£30,878). There is a special provision for tax arising on acquisition of new subsidiaries amounting to £24,172 (nil).

EDWARDS HIGH VACUUM, LTD.—Group trading profit increased from £295,851 to £363,127 in 1960 and the dividend is raised from the equivalent of 13½ per cent. to 15 per cent. with a final of 10 per cent. The company has agreed to acquire the capital of J. H. Holmes & Son, Ltd., a private company, for approximately £38,500 cash and 35,000 Edwards 4s. Ordinary shares.

Group net profit of Edwards rose from £145,598 to £176,426.

SMITH & NEPHEW ASSOCIATED COMPANIES, LTD.—Group net profit for 1960, £1,151,114 (£1,158,522) and dividend 12½ per cent. (11.8 per cent. equivalent) as reported (*C. & D.*, April 15, p. 374). Fixed assets £6,949,026 (£6,174,281). Net current assets £6,020,745 (£5,939,031). Commitments £135,000 (£345,000). "Figures available covering that portion of the new year that already lies behind us are satisfactory," says chairman (Mr. G. E. Leavey). One of the subsidiary companies, Hospital Instruments, Ltd., the chairman states, has suffered from lack of sufficient syringes and needles to make fully effective the service which it is giving to some of the hospitals and "fairly heavy financial losses have had to be met in the current year." He believed the present year will see an end to the difficulties experienced by the subsidiary.

IMPERIAL CHEMICAL INDUSTRIES, LTD.—Manufacturing and trading profits for 1960 were 17 per cent. higher in 1960 at £93,629,000 than in 1959 in the case of the group and 18 per cent. higher for the company at £74,506,000 (£62,991,000). The annual report of the directors states that sales in the home market were up by 9 per cent. in value and 11 per cent. in volume. Exports at £96.6 millions, f.o.b., were at a record level and represented a 10 per cent. increase on 1959. Sales outside the United Kingdom of chemicals produced by the company's subsidiaries overseas are now about equal to the overseas sales of products manufactured in the U.K. The group's overseas sales of £255 millions now approaches in value the total home sales of the group. Exports of the company's pharmaceutical products increased by 23 per cent. Nearly £40 millions of new capital expenditure was sanctioned during the year. Expenditure on research during the year was £15 millions. [For accounts and proposed dividend see *C. & D.*, April 1, p. 320.]

TIMOTHY WHITES & TAYLORS, LTD.—A final dividend of 10 per cent. is proposed making 16 per cent. for the year to January 14 (against the equivalent of 13½ per cent. for the previous fifty-four weeks' period). Group trading profit and sundry income rose from £2,073,351 to £2,277,740, and after all charges and minority interest, the net balance is up from £694,491 to £803,974. Attributable to parent company is £803,974 (£694,491). Separate accounts for the subsidiaries covering the same periods are given and include the following: **TAYLORS (CASH CHEMISTS) TRUST, LTD.**—Group profit, £695,091 (£600,765); tax, £353,031 (£301,112); net profit, £342,060 (£299,653). **TAYLORS DRUG CO., LTD.**—Profit, £431,487 (£357,688); tax, £218,526 (£179,803); net profit, £212,961 (£177,885). **TAYLORS (CASH CHEMISTS) LONDON, LTD.**—Profit, £294,103 (£273,806); tax, £150,188 (£138,986); net profit, £143,915 (£134,820). **TAYLORS (CASH CHEMISTS) MIDLAND, LTD.**—Profit, £215,941 (£197,034); tax, £111,358 (£99,838); net profit, £104,583 (£97,196).

P. P. PAYNE & SONS, LTD.—Group profits for 1960 after all charges

including taxation are £74,790 (against £111,782, fifteen months ended December 31, 1959); United Kingdom taxation, £61,700 (£76,750). Proposed final dividend on Ordinary is 15 per cent., making a total of 20 per cent. (same). The company's seasonal peak trading period occurs in the last quarter of the calendar year and accordingly the results for the year to December 31, 1960, are not directly comparable with those for the preceding period since the latter had the benefit of two Christmas quarters. Considerable expansion has taken place in the last twelve months particularly in connection with the introduction of new products. The company is also embarking on a long-term development programme which will require additional permanent capital. To provide the money required, the directors propose to issue 268,800 Ordinary shares of 5s. by way of "rights" in the proportion of two new shares for every five shares held, at a price to be announced after the annual meeting on May 12.

NEW COMPANIES

P.C.—Private Company; R.O.—Registered Office

VIGNY PERFUMES (DISTRIBUTORS), LTD. (P.C.)—Capital £1,000. To carry on the business of dealers in perfumes, cosmetics, etc. Directors: Joseph S. Lec and Sidney E. Lec. R.O.: 10 Bury Place, New Oxford Street, London, W.C.1.

WET & SET, LTD. (P.C.)—Capital £1,000. To carry on the business of and dealers in cosmetic and toilet preparations, etc. Directors: Arthur H. Lowe and George T. Day. R.O.: 34 Upper Brook Street, London, W.1.

R. G. POTTS, LTD. (P.C.)—Capital £2,000. To carry on the business of chemists, etc. Directors: Elsie Potts, John R. T. Bangs and Laurence L. Smith, M.P.S. R.O.: 14 Stonegate Road, Leeds, 6.

BELL GREEN PHARMACY, LTD. (P.C.)—Capital £1,500. To carry on the business of dispensing chemists and druggists, opticians, etc. Directors: Roy O. Chew, M.P.S., and John B. Carroll. R.O.: 21 Queen's Road, Coventry.

C. SWIFT (CHEMIST), LTD. (P.C.)—Capital £1,000. To carry on the business of chemists and druggists, etc. Directors: Claude Swift, M.P.S., and Gladys C. Swift, R.O.: 256 Lee High Road, London, S.E.13.

ERIC C. E. WEEKLEY, LTD. (P.C.)—Capital £2,500. To acquire the business of a pharmacist carried on at 131 Bishopton Road, Ely, Cardiff, etc. Directors: Eric C. E. Weekley, M.P.S., Robert E. Jones, M.P.S., and John D. A. Morgan, M.P.S. R.O.: 4 Museum Place, Cardiff.

FRANCIS J. CARR & SON, LTD. (P.C.)—Capital £2,000. To carry on the business of pharmaceutical and dispensing chemists, etc. Directors: Francis J. Carr, M.P.S., Doris Carr and James R. I. Carr, M.P.S. R.O.: 11 The Crescent, Hyde Park Corner, Leeds, 6.

WILLETTS & BRADLEY, LTD. (P.C.)—Capital £1,000. To carry on the business of chemists, druggists, drysalters, etc. Directors: Malcolm S. Willetts, Margaret L. Willetts, M.P.S., and Wilfred D. Bradley, R.O.: 488 Coventry Road, Small Heath, Birmingham.

REXALL DRUG CO., LTD. (P.C.)—Capital £100. To carry on the business of chemists, druggists, drysalters, etc. Subscribers: William A. Kneen and Eric V. Ridgeway. The first directors are to be appointed by the subscribers. R.O.: Morley Street, Loughborough, Leics.

BRITISH GLANDULAR PRODUCTS, LTD. (P.C.)—Capital £15,000. To carry on the business of manufacturers of and dealers in chemicals, etc. Subscribers: Richard T. Jeffree and Cedric A. Jeffree. R.O.: 1 Southampton Place, London, W.C.1.

GEOFFREY BACK (CHEMIST), LTD. (P.C.)—Capital £1,000. To carry on the business of wholesale and retail chemists, etc. Directors: Geoffrey Back, M.P.S., and Shealagh M. Back. R.O.: 155 High Street, Stoke Newington, London, N.16.

BROWNS CHEMISTS (HELSEBY), LTD. (P.C.).—Capital £1,000. To carry on the business of chemists and dispensing opticians, etc. Directors: Frederick Brown, Pamela Brown, John E. Hughes, Mildred M. Hughes and George L. Hogg. R.O.: Britannia Road, Helsby, Ches.

A. W. HIDDLESTON (CHEMISTS), LTD. (P.C.).—Capital £2,000. To carry on the business of manufacturers of and dealers in chemicals, gases, drugs, etc. Subscribers: Alfred W. Hiddleston, M.P.S., and Kathleen M. Hiddleston. Alfred W. Hiddleston is the first director. R.O.: 53 Broad Park Road, Henley Green, Coventry.

BUSINESS CHANGES

H. S. MARTIN & CO., Chemists, are opening a pharmacy at Hambleton Road (Berg Estate), Waterlooville, Hants.

THE name of Leda Chemicals, Ltd., has been changed to Leda Pharmaceuticals, Ltd. The company, which is a subsidiary of F. W. Berk & Co., Ltd., has its plant at Edmonton, London, N.18.

Appointments

VINATEX, LTD., Devonshire Road, Carshalton, Surrey, have appointed Mr. D. E. Gatfield sales manager.

H. J. ELLIOTT, LTD., E-Mil Works, Treforest Industrial Estate, Pontypridd, Glam, have appointed Mr. F. E. Broadfield their general works manager.

CULLINGFORD OF CHELSEA, Webber Road, Kirkby, Liverpool, have appointed Mr. G. Birkwood their representative for the Newcastle and North-eastern area.

RADIOL CHEMICALS, LTD., 78 Upper Richmond Road, London, S.W.15, have appointed Mr. B. Pritchard their representative in the Birmingham area and Mr. S. D. Arthur in East Anglia.

ARMOUR PHARMACEUTICAL CO., LTD., Hampden Park, Eastbourne, Sussex, have appointed the following representative staff:—Mr. M. Nolan (for Huntingdonshire, Cambridgeshire, Norfolk, Suffolk, Essex and parts of East London); Mr. J. G. Wilson (Cumberland, Durham, Westmorland and Northumberland); and Mr. G. H. Hoyle (Herefordshire, Gloucestershire, Wiltshire and part of Somerset).

DISTILLERS CO. (BIOCHEMICALS), LTD., The Broadway, Wimbledon, London, S.W.19, have appointed Mr. C. A. Barnes, M.P.S., to the new position of general sales manager. The appointment of home sales manager, which has been held by Mr. Barnes for the past five years, is taken over by Mr. T. W. Webster, M.P.S.



Mr. C. A. Barnes

L. W. Goulding, M.P.S., who has been a regional manager in Northern England, is now assistant home sales manager, replacing Mr. J. D. Ironside, M.P.S., who is now appointed hospital sales manager.

MANUFACTURERS' ACTIVITIES

A New Factory Goes Up.—Three Hands Products, Ltd., recently started construction work on new premises at Porters Wood, St. Albans, Heris, to meet their expanding business in Three Hands and Evan Williams products.

Medical Supplies for an Expedition.—Willows Francis, Ltd., Epsom, Surrey, have donated supplies of Xylotox brand lignocaine local anaesthetics, P.M. Co. syringes and needles, Minac buffered analgesic tablets and Vesagex antiseptic ointment to the Royal Air Force Karakoram Expedition. The expedition, which consists of sixteen members of the R.A.F., and includes two liaison members of the Pakistan Air Force, is leaving the United Kingdom in June next to survey and climb K6 (Peak Baltistan), a 24,000-ft. mountain in the Karakoram range in North Kashmir.—Explorers are taking with them to a peak 23,000 ft. high in the Himalayas in April supplies of Lactocalamine and tubes of hand cream donated by the manufacturers, the Crookes Laboratories, Ltd., London, N.W.10. A spokesman of the company states that previous explorers have found that the product gave protection against sunburn and protected face and hands from wind chapping and skin cracks. The expedition is being led by Mr. John Tyson, a geography master at Rugby school, whose party hope to be the first to complete a circuit of three Himalayan ranges in Nepal. To do that they must traverse a 20-mile gorge which has, so far, defeated all comers, and must scale peaks of up to 23,000 ft. in the Kanjiroba area.



LONG-SERVICE AWARDS: Seven employees with 180 years' service to Genatosan, Ltd., Loughborough, Leics, were recently presented by Sir Clavering Fison (chairman of the Fison Group of Companies) with long-service awards.

EXPANSION PLANS

THE heavy organic chemicals division of Imperial Chemical Industries, Ltd., is to construct a maleic anhydride plant at the company's Wilton works on Tees-side. A new process will be used in which butene is oxidised with air, and the plant will have a capacity approaching 10,000 tons a year of maleic anhydride when it is fully developed.

COLGATE-Palmolive, Ltd., have recently opened a new warehouse at Brimsdown, near Enfield to provide a personal van service to customers within a 30-mile radius and, in addition, to serve Essex, Hertfordshire, North Middlesex, Buckinghamshire, Berkshire and Bedfordshire. The company expect to open a further four or

five warehouses within the next few years to give an improved and quicker distribution service to their customers.

COURTAULDS, LTD., announce plans to erect a plant to manufacture monochloroacetic acid and sodium monochloroacetate which are not at present made in Great Britain. The plant is to be at the Spondon factory of British Celanese, Ltd., who will utilise a continuous process capable of giving high yields. Plans are sufficiently advanced to indicate that supplies will be available early in 1962. Production capacity has been planned to meet foreseeable United Kingdom requirements of both chemicals and to enable the company to enter export markets.

BIRTHS

MCALINDEN.—At Belfast on April 4, to Dorothy, wife of Dennis McAlinden, M.P.S.N.I., 67 Belmont Church Road, Belfast, a daughter (Orla Meleesa).

MARRIAGES

KIRrane—ALYMER.—At Donnybrook Church, Dublin, on April 3, Carmel Teresa Kirrane, M.P.S.I., Callow, Ballina, co. Mayo, to Francis Alymer, Castledermot, co. Kildare.

SEWELL—TRANT.—At St. Mary's Cathedral, Killarney, on April 3, Mary Angela Sewell, M.P.S.I., New Street, Killarney, to Lieutenant John Trant, Army Corps of Engineers, Collins Barracks, Cork.

DEATHS

ANDERSON.—On April 1, Mr. Charles Anderson, M.P.S., Maud, Aberdeenshire. Mr. Anderson qualified in 1915.

BOWIE.—On March 31, Mr. Archibald Bowie, M.P.S., 104 Motspur Park, New Malden, Surrey. Mr. Bowie qualified in 1922.

CLEGG.—On February 11, Mr. Alan Clegg, F.P.S., 146 Wall Hill Road, Dobcross, Oldham, Lancs. Mr. Clegg qualified in 1954.

EASTWOOD.—On March 16, Mr. George Hamilton Eastwood, M.P.S., 55 Blyth Road, Maltby, near Rotherham, Yorkshire. Mr. Eastwood qualified in 1918.

HEBGIN.—On March 27, Mr. William Hebgin, M.P.S., 15 Roseacre Road, Welling, Kent. Mr. Hebgin qualified in 1924.

KIRKMAN.—On April 6, Miss Kathleen Mary Kirkman, M.P.S., 60 London Road, Tunbridge Wells. Miss Kirkman qualified in 1922.

KNIGHT.—On March 30, Mr. Leonard Holder Knight, M.P.S., 12 Russell Hill Road, Purley, Surrey. Mr. Knight qualified in 1903.

THOMAS.—On April 5, Mr. Ronald Percival Thomas, M.P.S., 109 Hazelbank Road, London, S.E.6. Mr. Thomas qualified in 1929.

WATTS.—On April 1, Mr. Walter Watts, for thirty-six years a director of Stevenson & Howell, Ltd., Standard Works, Southwark Street, London, S.E.1. Mr. Watts retired in 1953 after fifty-nine years' service with the company.

NEW PRODUCTS AND PACKS

Coronary Vasodilator.—For the prevention and relief of angina pectoris, Benger Products division of Winthrop Group, Ltd., Winthrop House, Surbiton on Thames, Surrey, have introduced Gina tablets each containing 2-ethyl-2-hydroxymethylpropan-1:3 diol trinitric acid ester 10 mgm. Pack is a bottle of 100.

New Antihistamine.—Boots Pure Drug Co., Ltd., Station Street, Nottingham, announce the introduction of Febramine, a new antihistamine compound said to be devoid of sedative or anticholinergic actions or any other side-effects. Febramine is presented as yellow, scored tablets, each containing cetoxime hydrochloride 100 mgm. in containers of thirty and 250.

Not Yet for General Release.—Merck Sharp & Dohme, Ltd., Hoddesdon, Herts, announce the introduction of a new product Tryptizol (amitriptyline hydrochloride). The release at this stage is to meet hospital requirements only. Tryptizol is to be issued in two strengths, 10-mgm. and 25-mgm. tablets, but at present only 25-mgm. tablets are available in bottles of thirty, 100 and 500.

Multi-purpose Disinfectant.—Developed to provide increased germicidal and virucidal properties over a wide and evenly balanced spectrum, Ibcol Extra is manufactured by Jeyes Sales, Ltd., River Road, Barking, Essex. It is claimed to destroy airborne infection and may be used in offices, factories, etc. to reduce the spread of infection and give a freshening effect on stuffy atmosphere. It may also be used domestically for washing walls and floors or for use in washing machines. Ibcol Extra is available in containers of one, five and forty gallons.

For Hay Fever.—G. D. Searle & Co., Ltd., High Wycombe, Bucks, announce the availability of Mitronal brand cinnarizine, which they claim provides better symptomatic control, is extremely well tolerated over a wide dosage range and practically devoid of side effects. Mitronal is also recommended by the manufacturers for chronic allergic rhinitis, vasomotor rhinitis, cutaneous allergic disorders and vertigo. It is claimed that there are no known contraindications to Mitronal. The presentation is a scored tablet containing cinnarizine 15 mgm. and packs are bottles of fifty and 250 tablets.

Pocket Size Insulin Syringe Case.—Surgical Equipment Supplies, Ltd., Westfields Road, London, W.3, have made available a new pocket size plastic syringe case specially designed for the B.S.I. 1619 insulin syringe. The case is spirit proof and has a polythene washer and retaining spring to hold the syringe firmly in the spirit. It is made for syringes up to 2-mil size.

Aerosol Foot Spray.—To cool and give relief to hot and tired feet Messrs. Ayrton, Saunders & Co., Ltd., Hanover Street, Liverpool, 1, have introduced Jaunty foot spray in an aerosol container.

Trainer Pants for Babies.—Kleinerts Rubber Co., Walpole House, 91 New

Bond Street, London, W.1, have introduced "Trainer" baby pants for use during toilet training. The pants are made in fine waterproof vinyl with soft absorbent terry lining.

A Footstick.—In the form of an out-sized lipstick, Toot-eez footstick, distributed by Bevington Merchandising Co., Ltd., 41 Market Street, Brighton, is claimed to give, when applied to the soles of the feet, instant cooling relief. The product is packed in a plastic container convenient in size for the handbag.

Sun Tan Creams.—Rolls Razor, Ltd., Cricklewood Broadway, London, N.W.2, announce the introduction of Super Man Tan, a "strong" cream tanning lotion claimed to give a longer lasting tan, and Miss Man Tan, a moisturising tanning cream for women with full tanning properties and sun filter, which is said by the makers to be "ideal for use as a foundation cream." The two products will be available at the end of May to coincide with a large scale national advertising campaign.

An Oil Shampoo Treatment.—French of London, recognising the problems that arise from over-bleaching of the hair, have produced an olive-oil treatment shampoo. Applied hot, the treatment is presented as a sachet that is prepared by immersing it in hot water. The treatment is applied to wet hair, massaging the contents well into the scalp. After a rinse and second application the hair is rinsed finally and



thoroughly in warm water. The treatment is claimed also to combat dandruff.

TRADE NOTES

Shaver "Trade-in."—Sunbeam Electric, Ltd., Nerston, East Kilbride, Glasgow, are now operating their £2 trade-in for all their male shaver models (see *C. & D.*, March 4, p. 210).

Prices Reduced.—The manufacturers of Rodine Warfarin, Rcntokil Products, Ltd., School Lane, Fetcham, Surrey, announce the reduction in price of the two smaller sizes of this product.

Increased Price—Greater Profit.—Hunter, Hardy, Ltd., Dawson Street, Hyde, Cheshire, announce that the retail price of their Boldoot Eau de Cologne cleansing towlettes will be increased from May 1. The whole of the increase will be passed on to the trade.

A Monthly on Management.—Issued "in the interest of scientific pharmaceu-

tical business administration," *Pharmacy Management* contains in the twenty-eight 8½ x 5½-in. pages of its first number articles on law, market research, taxation, salaries and wages, etc. Published by Pharmaceutical Business Analysis Service, Eastcote, Pinner, Middlesex, its editor is H. W. Tomski, B.Com., M.P.S., D.B.A.

Change of Name.—Imperial Chemical Industries, Ltd., pharmaceuticals division, Alderley Park, Ches., are presenting I.C.I. Insect powder, formerly



known as Gammexane insect powder, in a newly designed sprinkler top container of 100 gm.

Tooth-brush and Comb "Dispensers."—Nine new tooth-brush and comb dispensers in chromium-plated wire, and designed to take up a minimum amount of counter space, have been produced by the Halex division of the British Xylonite Co., Ltd., Highams Park, London, E.4. They include a "round-about," which displays 12 doz. Imprene combs, and a similar device for a full range of Halex tooth-brushes and new Imprene combs (6 doz. of each). A dispenser for standing on the counter contains a selection of 6 doz. nylon combs and there are three displays of 4 doz. nylon combs each (one, a selection of nylon combs in assorted colours; another in black and tortoiseshell only; and a third in PVC cases). There are also three display stands each holding 3 doz. assorted tooth-brushes (one bristle, the other two nylon). For smokers there is a display of 1 doz. brushes of extra hard texture and for children a "Noddy" dispenser containing 1 doz. each nylon and bristle tooth-brushes, and a dispenser carrying 1 doz. junior short-head tooth-brushes. A free balloon is offered with each tooth-brush in that display.

Bonus Offers

IMPERIAL CHEMICAL INDUSTRIES, LTD., Pharmaceuticals division, Alderley Park, Macclesfield, Ches. I.C.I. Insect powder. Twelve containers invoiced as eleven. Offer closes June 27. Available only through the company's representatives.

PRETESTED PRODUCTS, LTD., Rickmansworth, Herts. Arrid super spray. First 2,000 orders. 14 to doz.

INFORMATION WANTED

Arrive Perfect hair spray
White Mist hair spray
Spoolies hair rollers

Public Pharmacists' Second Week-end School

A FULL AND VARIED PROGRAMME AT BRISTOL

GLUTTONS for punishment, hospital pharmacists set themselves a programme that occupied them from 9 in the morning to 10 or 11.30 at night at their second residential week-end school, held at Bristol, April 14-16. 130 took part, representing 10 per cent. of the total membership of the Guild of Public Pharmacists.

The opening session took place at the Bristol College of Technology on Friday evening, when at 7 p.m. the students were welcomed by DR. G. C. KELLY (senior administrative medical officer, South-western Regional Hospital Board), and Mr. S. C. Merivale (secretary to the board of the United Bristol Hospitals) before passing to a discussion on "The Post-graduate Student." Opening it, MR. D. A. NORTON, B.Sc., F.P.S. (head of the school of pharmacy at the College) said that while there had been many contributions to the pharmaceutical Press on the subject of education, few had dealt with it from the point of view of the raw material: the student himself. The outlook of the student could be profoundly influenced by his college career, and teachers had a heavy responsibility. But they were forward-looking people who took a pride in the development of their subject. Since 1946 the momentum had been towards a more academic course of training in pharmacy, and today the number of degree students was in excess of the number of diploma students. By today's standards the qualifying course of twenty years ago could be considered little more than technician training. The pharmacist of today could justly claim his place in the ranks of the technologists. Normally the entrant had the required basic academic entrance qualifications, but the universities with internal degree courses made their selection and the remainder went either into an external degree or the diploma course. In theory they were all well qualified to enter, but many of those with three Advanced level science subjects had only marginal passes. They showed a surprising number of deficiencies, as evidenced by poor spelling and unreliable calculations. In the pharmacy school of the technical college the

student was not left so much to his own devices as at the universities, but the aim of the teachers was to produce somebody technically efficient, well versed in fundamentals, capable of thinking out a problem, adaptable to change and progress, reliable under stress, compatible with the Society, and sufficiently educated to stimulate a respect for pharmacy among the other professions. At the point of embarkation on a post-graduate training the student had had three years of absorbing study and facility in the use of a wide range of modern scientific equipment. Some might not look forward to the reduced scientific activities of work in retail, and there the hospital pharmacy came into its own, offering opportunities of investigational work. The students of today were fortunate and there was not much wrong with their outlook if the changes in society as a whole were allowed for. There was a tendency for them to underestimate the amount of sheer hard work involved in the course. It was his own view that many of them achieved positions of responsibility at too early a date after qualifying.

Comments and Questions

MR. J. A. MYERS, Edinburgh, praised Mr. Norton's address for being very much the remarks of a practical man in touch with the practical problems of today. He considered there was a place for hospital work by the student during his training.

MISS P. M. BROOK, who asked the speaker's view on whether twelve months was the right length of time for the practical training, was told that he thought a year in the right place and under the right supervision should be enough. There was a marked trend in technical education towards organising studies integrated with work in industry, which for pharmacy would mean in retail, hospital or manufacturing pharmacy. The "sandwich-course approach" might have to come in pharmacy.

It was possible, said MR. P. CREES, Birmingham, to take too mechanical a view of the age at which a pharmacist should be given a responsible post, and

starting them off young might not have worked out too badly in practice. On the quality of entrants he was worried that pharmacy must still take candidates with "marginal" passes, and MR. NORTON pointed out that the entry was anomalous compared with other technologies. Holders of three good A-level passes normally went to university, which meant that pharmacy schools tended to get the less good. He would rather see the standard adopted of two good A-level passes.

MR. E. T. GRIFFITHS, Cardiff, said he had found post-graduate trainees "uniformly good." Their practical training was in accepting responsibility, and they usually took it very well. But what happened afterwards. Far too many went into retail and were lost to hospital pharmacy.

Was it good or bad, asked MR. H. GIBBOR, Cardiff, that trainees could split their training into two six-month periods? There was an objection to it from the chief pharmacist's point of view. The speaker's answer was that educationally it was a good thing, giving experience in more than one facet of pharmacy.

MR. G. RAINE, London, gave as his meaning of the point of post-graduate training not to learn practical things but to become a professional person, and MR. E. GEORGE, Bristol, thought its success depended on a right personal relationship between apprentice and apprentice-master, and it took months to establish that.

Co-operation between schools and hospitals was proving valuable for recruitment into pharmacy in Liverpool, said MR. K. GISBORNE, Wirral. Each student was given some time at work in a hospital pharmacy. MR. B. H. SMITH, Manchester, described a similar scheme in operation in that city.

That some who had a hospital post-graduate training went into other fields did not distress MR. G. H. DARLING, Bristol, who said many came to get a better all-round viewpoint on pharmacy.

Between paper and discussion there was an interval for viewing the school of pharmacy at the College—and for refreshments.



Hospital pharmacists at the opening session.

At the Saturday morning session MISS M. C. ISLIP presided, as having been most active in the Guild's research and planning committee, which, said MR. POWLSON, had already put in five reports of value to pharmacists and hospital planners, its most recent being that on central sterile syringe departments.

The first speaker, MR. W. A. WEATHERHEAD (architect and administrator in charge of Bristol hospital works and buildings) reviewed "the hospital world as a whole." There were in Britain, he said, 550,000 effective beds, or eleven per 1,000 of population. That compared with 9.2 per 1,000 in the United States. "Acute" beds in general hospitals numbered 3.6 per 1,000, though the Minister considered 3 per 1,000 would be adequate. Half of the beds were in hospitals sixty years old and most of them in hospitals of less than 100 beds, only 25 per cent. being in hospitals of the size considered optimum (400/600 beds). Hence most money available would be spent on building new hospitals. Many smaller ones would be disposed of. Considering that one hospital bed cost £5-10,000 to provide, the importance of accurate estimates was obvious. The general hospital of the future would probably have wards for all specialties except psychiatric, geriatric, maternity and paediatric. The present "standard" ward was not likely to continue. It would probably be replaced by one containing thirty beds, six of them in single rooms and the remainder in bays of four or six, though research on cross-infection might show that rooms were better than bays, and difficulties in recruiting nurses might lead to 16-bed "intensive" and 50-bed "non-intensive" wards. Ample bay space would be provided in the new hospitals. So would central sterile syringe departments—"a comparatively small department with no disadvantages." X-ray and pathology departments would probably be centrally placed to serve in-patients, out-patients and casualty. There would probably be fewer and larger casualty departments. Disposable paper towels and napkins and plastic containers were already here and disposable bedpans were on the way. There would probably be wider use of artificial ventilation.

The second paper was presented by MR. W. WALCH (a member of an architectural partnership).

Architect's Approach to Pharmacy Design

The questions the architect would ask the pharmacist were: What is the purpose of the department? How does it operate? The pharmacist would possibly reply that the department was like a modern factory—a hygienic factory. It received raw materials, processed them, and passed them out as finished products. The materials included packages of all kinds of medicines, drugs, gases, acids, solvents, spirits, dressings and some equipment. They were delivered by messenger, by post, and by road transport. They entered at an "inwards" department, were unpacked, checked, and stored conveniently (work study) and safety (fire hazard). From store they passed to a dispensary, or

through a preparation department or aseptic department, where they were processed and where some research work may be carried out. From the dispensary the finished products to in-patients (by trolley), out-patients (by handing-out), or possibly to other hospitals. In due course empties were returned for washing and storing for re-use.

Factory Manager

To operate the department there would be a "factory manager" (the chief pharmacist), who would require an office, a staff, male or female, or both, who would require good working conditions.

From that information the architect would commence his analysis of the problem under headings.

SITE.—For raw materials: hard road access. For in-patient service: portered trolleys via a lobby off a communicating corridor. For out-patient service: Direct to patients in waiting hall or waiting bay off out-patient hall. To other hospitals: by road transport.

SIZE.—The report of the research and planning committee set up by the council of the Guild of Public Pharmacists gave recommended minimum areas for dispensary; preparation and aseptic space; stores; and office showing totals from 7.3 ft. super to 8.8 ft. super per in-patient bed, the area to be increased for waiting space, medical gas store, inflammable store, syringe service or surgical instrument store. Those matters would require discussion with the architect.

DEPARTMENTAL PLANNING.—Taking a hypothetical 400-bed general hospital with out-patient department as example and the 7 ft. per bed as minimum, the speaker suggested a disposal of the area as follows:

Office: 100 sq. ft.

Stores: 1,200 sq. ft.

Preparation (possibly divided into bulk; aseptic; and washing and sterilisation): 900 sq. ft.

Dispensary: 900 sq. ft.

He added strong recommendations for

Inwards lobby: 100 sq. ft.

Inflammable store: 150 sq. ft.

Staff cloakrooms: 100 sq. ft.

Cleaner's store: 50 sq. ft.

In-patient service: 100 sq. ft.

making the total 3,300 sq. ft. To get those economically near the desired site he proposed setting it on two floors, with stores and lavatories on the lower and pharmacy and dispensary on the upper. That would add 150 sq. ft. for stairs.

CONSTRUCTION.—For permanency, brick walls and concrete floors and insulated roofs were called for.

FINISHINGS.—The speaker discussed in detail the requirements for floors, (for the store-room, encaustic tiles; for the preparations room, battleship lino or non-slip PVC; for the aseptic room, terrazzo), walls, ceilings, windows and doors (wide enough for trolleys, flush, with peep-hole) and made recommendations for various specifications according to function.

FITTINGS.—He discussed similarly, benches, heated ointment slabs, unit cupboards and drawers, fume cupboards, aseptic cubicle, shelving, sinks, taps, etc. Benches in the stores could

well be on brick or concrete stillages and of steel or PVC; part should be adjustable. Upstairs, it could be of stainless steel or glass and all should be adjustable. Half-shelves could be placed behind winchesters at neck height. Under waste pipes there should be a bottle trap.

Engineering Problems

MR. R. E. STOKES (a heating and ventilating engineer) said that the thoughts of engineers must be exercised at the earliest stage in the discussions. He stressed the need for adequate and readily accessible provision for housing the services. For a hospital pharmacy they fell under the headings space heating, ventilation, air conditioning, domestic hot water, cold water (pressure and tank supplies), distilled water, fire-fighting services, gas services, steam sterilising, "plus" and "minus" air; and electric lighting, power, fire alarms, clocks, telephones and poison cupboard illumination. Choice of space-heating system must be governed by hygiene; floor and wall space (to use the least possible); comfort (warmth without lethargy); control by simple thermostatic and manual methods; and room heights (ceiling heating not recommended for low ceilings). A form of heating fulfilling the requirements under those headings was the fan-assisted convector, which occupied only 30 per cent. of floor area of the conventional radiator. It could be recessed into walls, fixed in an adjoining store, or built into a cupboard fixture.

If the environment made mechanical ventilation necessary, air should be admitted by way of a filter, ductwork system and fan, preferably built-in or concealed at high level, and fitted with velocity reducing outlets to eliminate draughts, plus access doors for internal cleaning. There should be a slight tendency to create an internal air pressure, but no normal ventilation system could mitigate sudden air currents, as from passages in direct contact with the outside air. Fume cupboards should be positioned to eliminate long horizontal ducts, and should be fitted with fans capable of producing a velocity of at least 75 ft. per minute with the doors open 2 in. The extent to which air conditioning was required for sterile departments must be decided by the pharmacist. Good filtration practice would provide for ten to fifteen changes per hour and use dry filter media 2 in. to 3 in. in thickness. Maintenance engineers should not have to enter sterile rooms to rectify faults. Distilled water was an essential service that could be piped to draw-off taps, using only PVC pipes, with PVC-protected taps and fittings.

Gas piping should, for freedom from dust, be concealed, not clipped to walls. Gas cocks were most conveniently fitted at the rear of the benches, but controls should be at the front to minimise risk to both operator and apparatus. Steam sterilisers should be fitted with automatic devices to reduce the steam supply when boiling temperature was reached. Exhaust hoods with fans, kept low (6 ft. 6 in. was a workable height) should cover an area greater than that of the sterilisers.

"Minus" air services were useful when vacuum pumping of liquids was not practicable. The installation would normally be part of a set-up for the whole hospital. If compressed air were required, a $\frac{1}{4}$ h.p. compressor would be a suitable source.

Discussing the electrical services of a pharmacy department MR. T. S. HESLOP (electrical associate of Mr. Stokes) said a well conceived scheme would allow for the growing use of small electrical appliances and for possible future modifications without major and costly revisions of the installation. Tasks performed in the department must be studied so as to provide maximum visual comfort for carrying them out. A good level of general illumination should be attained (twenty or perhaps, after May, when new recommendations were due, thirty lumens per sq. ft.). Fittings to avoid harboured dust should be chosen. In new buildings flush lighting units, or even illuminated ceilings, were possible. Special lighting was required in poisons cupboards; the British Standard did not specify the lamp source but he recommended architectural-tube rather than "pigmy" lamps. For power he urged 13-amp socket outlets in well-thought-out positions, clear of infiltration by water. Manufacturers were developing laminated-plastic fascia plates for sockets mounted on benches. To combine flush fittings with maximum flexibility he suggested trunking systems to allow the inclusion of socket outlets at 24-in. intervals; they were designed to fit neatly into bench upstands or within service ducts built into the bench.

Sterile Supply Service

On Saturday afternoon DR. MALCOLM HARRIS presented a paper entitled "The

Sterile Supply Service." He posed the question whether money should be spent on comprehensive central sterile departments at a time when, with the increasing use of disposable items, the department might become redundant. He put the case for a more limited department in which the fullest use would be made of disposable needles and syringes. Of such a department, he said, the pharmacist was the proper person to take charge.

MR. J. A. MYERS drew an analogy with industry, and suggested that the pharmacist should produce but be subject to the "analytical control" of the pathologist. The speaker disagreed, saying that the new pharmacist had the training to do sterility testing. He did not regard the pharmacist as a mere production engineer.

MR. G. LENNOX, Swansea, said that the fact that the sterility tests upon ethylene oxide sterilisation varied with the method used cast doubts on processes based on the compound. The speaker's reply was that the doubt on ethylene oxide was theoretical. It had not given much trouble in practice.

MR. A. E. MARSTON, Birmingham, agreed with Mr. Harris that the present-day pharmacist was a suitable person to carry out sterility testing, but should not a second opinion be obtained? The matter was not, on all fours, with chemical analysis of everything the pharmacist prepared, for it was a B.P. requirement that the product "must be sterile." MR. H. S. GRAINGER, London, said the question was "Who is responsible for the material?" The pharmacist should always be in at the start of a central sterile department, but always the person most competent to run the department should be chosen to take responsibility for it. MR. P. CREES, Nottingham, said that no one

person knew all the answers. It was therefore "a team job."

MR. A. R. WHITTINGHAM, Brighton, found fault with the current design of hot-air ovens which should be, he said, not cubic but flat, with not more than one shelf. Problems caused by convection would not then arise.

MR. G. RAINE, London, said his experience with disposable syringes was that they were by no means so good as conventional syringes, but MR. DARLING, Bristol, said disposable needles "had the edge on" re-sharpened ones.

Evans Medal Award

After lunch on April 15 the Evans medal (for merit in pharmacy) was presented to Mr. John H. Wood (chief pharmacist, Royal Marsden Hospital). The presentation was made by Mr. C. W. Robinson (director, Evans Medical, Ltd.), who referred to the new phase that his company had recently entered. It had valued the many expressions of regard and understanding which were received from the world of pharmacy—and not least from hospital pharmacy—during the period of vital decision. The concern that the tradition, identity and service should be maintained was heartening for it implied all that they had collectively striven to build up in the past. "But, more than that, it was a challenge to us to ensure that we preserve, in any new set of circumstances, the spirit of respectful reciprocity which exists between us and those we serve, and is exemplified in the ceremony of this annual award." It was with very great pleasure that he asked Mr. Wood to accept the 1960 award of the Evans medal and congratulated him most heartily on the achievement.

(To be concluded)

STERILISATION OF SURGICAL MATERIALS

(Continued from THE CHEMIST AND DRUGGIST, April 15, 1961)

THE second paper at the symposium on sterilisation held at the School of Pharmacy, University of London, April 11-13, was presented by DR. D. B. POWELL (Wantage Research Laboratory, Atomic Energy Research Establishment). It was a general review of the application of radiation sterilisation to surgical materials. He commenced by defining two basic units of radiation, the curie and the rad. The rad (the unit of absorbed dose) was 100 ergs per gram of material. The modes of sterilisation of heat and radiation were quite different and could not be directly compared. For some hours after bacteria had been exposed to radiation treatment it was possible to measure enzyme activity, respiration and motility. Such properties were not observable after heat treatment. The two processes were, however, similar in that the rate of killing was exponential. Dr. Powell said radiation sterilisation investigations had commenced with a study of the range of resistances (or sensitivity) of various micro-organisms. *Bacillus pumilus*, a highly resistant organism, was eventually selected as the standard test organism. It was found that *B. pumilus* had an inactivation factor of

10^{10} to 10^{12} with a dose of 2.5 M rads. That dose was recommended as sufficient to produce a "high degree of sterility" and was employed at Wantage. Dr. Powell stressed the effect of environment on radiation sensitivity, and the fact that vegetative organisms were more susceptible than spores. Freeze drying increased the resistance of vegetative forms. Such factors made it important to investigate the nature of the contamination of the material it was proposed to sterilise. Dr. Powell believed there was a danger that the use of lower doses for particular applications (e.g. 0.5 M rad for the sterilisation of blankets) might lead to the emergence of radiation-resistant mutants or the production of pathogens from organisms that, at present, were non-pathogenic. One of the most useful applications of radiation was for the sterilisation of materials such as bone and tissue grafts, sutures and arterial tissue. Great strides had been made in that field in the U.S.A. It was probably the best method for freeze-dried bone tissue. Sterilisation could be carried out in the final containers and with catgut there was the advantage of only a slight loss of tensile strength—4 to 8 per cent. Referring to

the sterilisation of disposable items Dr. Powell urged that it was essential for all commercial concerns to raise their standards of packaging. They should be capable of being opened without contamination. Dealing with another point he stated that induced radioactivity was impossible using gamma-rays of the degree of activity currently employed.

Radiation Sterilisation

The theme of the afternoon session was "Radiation Sterilisation." The first paper "High Energy Electrons for Radiation Sterilisation" was presented by J. G. TRUMP, Professor of Electrical Engineering, Massachusetts Institute of Technology, U.S.A. Professor Trump considered the use of high energy electrons for general sterilisation application and reviewed the physical factors involved in their use. He suggested as appropriate criteria for evaluating the usefulness for sterilisation of ionising energy that: (1) The ionising agent should preferably be of the type which accelerated electrons within the absorber. The ionisation from the lightly ionised tracks of secondary electrons produced by x- and gamma-ray absorption, or by high

energy electrons and ultraviolet light, were acceptable within that criterion. (2) The ionising energy should be capable of penetrating to an adequate depth within or through the absorber and should deliver an approximately uniform dose. The penetration of electrons, though limited, increased directly with accelerating voltage and could be designed to secure adequate irradiation in depth. (3) The ionising energy should be available in quantity and at a cost to process safely and economically the bulk quantities involved. (4) The source of ionising energy should permit irradiation of the medium in any state, including solid, liquid, lyophilised, and frozen. (5) The ionising energy actually absorbed in the medium must be capable of accurate application, measurement, shielding, and control. Shielding was accomplished readily with electrons because of their defined direction and range together with the inefficiency of x-ray production. Professor Trump went on to give a description of the nature and properties of electrons. Sterilisation required the destruction of every organism in the medium and that that could be achieved by irradiation had been abundantly demonstrated. Particle accelerators competed with artificial radioactive materials and with radiation reactors in several applications. The advantages of machine sources of ionising energy for processing arose from their adaptability, from their intense and directed output with the associated compactness of the shielded radiation vault, and from the safety inherent in a controllable machine. The advantages of cobalt and caesium lay in the penetrating nature of their gamma-rays and in the expected future availability of low-cost isotopes. No advantage was discernible for direct use of reactor radiation with its limitations in flexibility, its mixture of gamma-ray and undesirable neutron energy, and its complications in cost and control. With isotopes it was desirable to distribute the activity throughout a considerable space so as to reduce self-absorption and to irradiate a large volume of surrounding slowly-moving material. That resulted in a radiation vault of considerable size and complexity and increased the exposure time to an extent often unfavourable. It also rendered more difficult the maintenance of special conditions such as the frozen state. Those considerations, together with the complications and precautions which attended the use of intense radioactive sources distributed about a moving product line, he suggested, might well give the practical and economic advantage to the particle accelerator. As a general rule, Professor Trump suggested that radiation processing, including sterilisation, should be accomplished at the lowest particle energy consistent with adequate penetration.

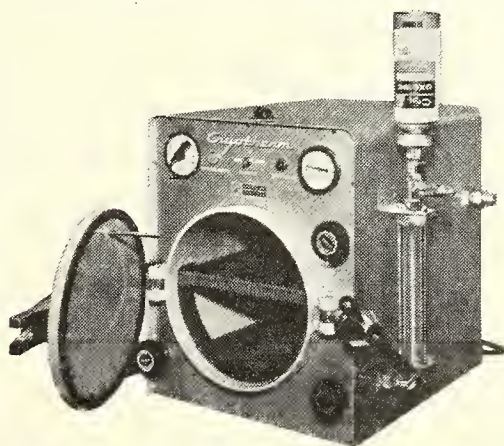
Gaseous methods

The theme of the morning session of the second day was gaseous methods of sterilisation. The first paper was presented by DR. C. R. PHILLIPS (U.S.A.). He considered the effect of moisture on the sterilising action of ethylene oxide. The optimum relative humidity was in the re-

gion of 30 per cent. It took "almost twice as long" to sterilise spores on cotton patches at high humidities as it did at that figure. At low humidities the death rate was not exponential. The curve obtained suggests a mixed population of organisms with a graded resistance and with a small population almost totally resistant to the gas. Some resistance, acquired through desiccation, persisted when sterilisation was performed in optimum relative humidities. Wetting the patches and drying at the optimum humidity seemed to cause a complete reversal of that effect. He considered the situation analogous to the problem of superheating in autoclaves. Extreme desiccation was unlikely to occur under normal atmospheric conditions and providing the effect was understood, it could be avoided.

Applications and Equipment

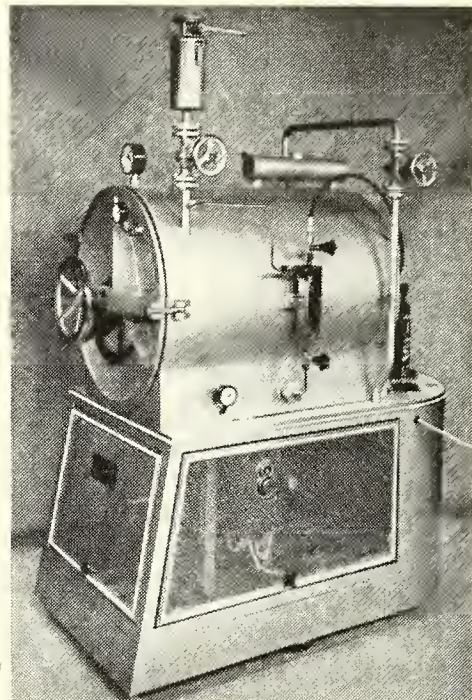
MR. J. J. PERKINS (vice-president, Research and Development, American Sterilizer Co., U.S.A.), presenting the second paper of the morning session, dealt with the applications and equipment for ethylene oxide sterilisation. He illustrated several types of gas sterilisers currently in use in the United States. The "Cryotherm" unit was of simple design and employed Cryoxide gas (a mixture of ethylene oxide and halogenated hydrocarbons) drawn from a 21-oz. can. A vacuum was first drawn and the sight glass half filled (which provided an ethylene oxide concentration of about 600 mgm. per litre), or filled (960 mgm. per litre), depending upon the exposure time desired. The gas was then released into the chamber. A manually-set timer controlled the exposure period. After sterilisation a final vacuum was drawn and then relieved with filtered air. MR. PERKINS illustrated larger units for use in hospitals, laboratories and industry. He then reviewed the applications of the



Portable ethylene oxide steriliser, manufactured by the American Sterilizer Co., Erie, Pa., U.S.A.

method in the food and pharmaceutical and medical equipment industries. The technique had been applied to the sterilisation of plastic bandages, catheters, rubber stoppers, sutures, bottles and vials, drainage and intravenous sets, syringes, blood oxygenators and antibiotics. The method, however, demanded attention to technical problems such as packaging materials, residual ethylene oxide in the exposed article and its toxicity and the time required for dissipation of the gas from exposed materials. Porous packaging materials

presented no difficulty, but materials such as plastic films could militate against effective sterilisation. Materials such as rubber, plastics and leather exhibited a solvent action for the gas. He concluded by emphasising the need for additional research on the subject.



Prototype 300-litre stainless steel ethylene oxide steriliser designed for hospital use. Manufactured by Degesch, G.m.b.H., Frankfurt-am-Main, Germany.

Ethylene oxide sterilisation equipment was also considered by MR. G. MAYER (Firma Degesch, Germany). In view of the fact that such equipment was used not only by trained operators but by unskilled personnel with a limited technical knowledge, additional safety devices were provided. The equipment usually consisted of a rectangular vacuum chamber, or several chambers joined together, a water-cooled piston air pump which produced a vacuum of at least 95 per cent. within a few minutes, an explosion-proof vaporiser, and a circulation system, together with rotary valves, etc. Automatic systems should be avoided, as sources of error were introduced. The material to be sterilised was placed in a chamber shut by a rapid-closure door. The chamber was evacuated and the required amount of gas added. At the end of the exposure time the gas was removed from the chamber and air was drawn in through a sterile cotton wool filter. After several repetitions, the ethylene oxide was almost completely removed. It had been found that an increased moisture content of the article to be sterilised considerably reduced the exposure time. Normally the membrane of highly resistant spores exerted a great impedence to the diffusion of ethylene oxide because of the muco-polysaccharide structure of the cell membrane. If such spores were placed in a high relative humidity (average 95 per cent.), the spore membrane swelled and became permeable to ethylene oxide. "Pre-moistening" reduced the minimum exposure time in some cases from six to two hours, and even to one hour without any change in concentration or temperature.

(To be concluded)

Pharmaceutical Society of Ireland

MONTHLY MEETING OF COUNCIL

DISCUSSION of various matters relating to the proposed new Pharmacy Bill occupied most of the monthly meeting of the Council of the Pharmaceutical Society of Ireland held in Dublin, on April 11. It was eventually decided, on the motion of MR. V. G. McELWEE to seek an interview with officials of the Department of Health to enable preliminary discussions to be carried out prior to the drafting of the Bill. The following members were appointed to the deputation: the president, vice-president, treasurer, registrar, and Messrs. H. P. Corrigan and M. L. Cashman. At the outset MR. F. J. ROBINSON thanked the members of the Council for their kind messages of inquiry on his recent illness. A letter was read from the secretary of the National Mass-Radiography Association, Ltd., seeking the co-operation and help of the Council in publicising the work of the Association. Stating that there was a good deal of apathy where mass x-ray was concerned, the letter added: "The directors believe that a word of recommendation on having an annual chest x-ray, coming from members of your Society, whose opinion is always being sought by the public where matters of health are concerned, would be of great assistance." MR. R. J. POWER said that the Association usually issued a standard-sized poster, which, because of its dimensions, was unsuitable for display in a pharmacy. He resented the fact that when the Association advertised they were calling to a town or village they ignored the pharmacists when handing out posters for display. Because of the nature of their work, pharmacists should be the first to be approached but if posters were to be displayed in pharmacies their size would have to be reduced. MR. O'NEILL said they would have to have regard to the ethical side of pharmacy. They could not just put up a poster in a pharmacy in the same way as in a grocer's shop. It was decided to write to the Association pointing out that the Council was in sympathy with its aims and suggesting smaller posters, more suitable for display in pharmacies. It was also agreed to appeal to members to co-operate with the Association.

Following the reading of a letter from a member requesting that lectures be given to students stressing that pharmacies should not only be hygienic and tidy, but should appear to be so, it was decided that in their final year the attention of students be drawn to that aspect of pharmacy.

A letter was read from the Irish Local Government Officials' Union stating that salary claims on behalf of the pharmacists' branch, had been lodged with the Dublin Health Authority. MR. CASHMAN said he was very glad to hear that such claims had been lodged. MR. R. J. POWER said that the Hospital Pharmacists' Association had also submitted a claim for increased salaries to the same authority three weeks ago.

MR. M. DAVITT-WALSH (secretary of the Photographic Dealers' Association) wrote thanking the Council for placing a hall at their disposal recently, and in appreciation of the facilities extended, enclosed a cheque for £5 5s. for the Benevolent Fund. A letter was also received from MR. T. R. MILLER (president of the Association of Ophthalmic Opticians of Ireland) thanking the Council for the facilities granted for a recent post-graduate course on contact lenses. In appreciation, the Association forwarded a cheque for £5 5s. towards the College of Pharmacy Fund, and another for £2 2s. for the Benevolent Fund. It was decided to write to both bodies thanking them for their subscriptions.

THE REGISTRAR reported that he had written to the Minister for Agriculture, as requested at the last meeting, suggesting that chemists be relieved of the tedium of copying long labels from original packs in the case of broken bulk, and further suggesting that where bulk was broken it should be sufficient to give the appropriate trade name, or equivalent identification. In that connection the fact that

the chemist's name and address was on the label should be quite sufficient to indicate the product. The registrar said he had received a reply from the Department stating that the matter was receiving the attention of the Minister.

THE REGISTRAR reported that Mr. L. V. Nolan, Abbey Road, Blackrock, had presented a cheque for £200 on behalf of Warner Lambert (Ireland), Ltd., to the Irish College of Pharmacy Fund. A cheque for £50 towards the Fund had also been received from Paines and Byrne, Ltd., Perivale, Greenford, Middlesex.

After hearing Mr. Kennelly, a member of the post-graduate committee, the Council agreed to the co-option to the committee of Miss Mairead Kyne, Shankill, who had intimated that she would be prepared to act as secretary.

THE REGISTRAR reported that the Commission on Higher Education had visited the College on April 8. The Dean (Dr. R. F. Timoney) had outlined the proposed new University course to them and the party had later made a tour of the College. MR. CORRIGAN said that the Dean had since informed him that the Commission was anxious to have some information concerning the finances of the College.

THE REGISTRAR reported on the deaths of Patrick Godfrey, M.P.S.I., and Francis T. Timoney, M.P.S.I., father of the Dean of the College, Dr. R. F. Timoney. The registrar was instructed to convey the sympathy of the Council to Mrs. Timoney and family.

It was agreed to add the name of Patrick Clancy, Islandbawn, Miltown Malbay, co. Clare, to the Pharmaceutical Assistants' Preliminary register. The licence certificates of William Michael Dolan and Thomas Feerick were signed and sealed.

The following changes of address were noted: J. McCarthy, L.P.S.I., from Carmel House, 16 Upper Gardiner Street, Dublin, to 19 Abbey Street, Ennis, co. Clare; J. O'Beirne M.P.S.I., from 5 Haven Close, Grasscroft, Oldham, Lancs, to 90 Bankhouse Road, Bury, Lancs. B. McGirr, M.P.S.I., Carnew, co. Wicklow, was elected to membership, and Mrs. E. Leavy, 94 Clanbrassil Street, Dundalk, co. Louth, and W. M. Dolan, Mount Bellew, co. Galway, were nominated for membership.

The names of Dr. Patrick Joseph Hennessy, Ballynacargy, co. Westmeath, and Dr. Samuel Asare Odei, Accra, Ghana, were added to the register of pharmaceutical chemists, L.A.H. certificates having been submitted.

At a meeting of the Benevolent Fund Committee which followed, grants totalling £92 were passed for payment. A vote of thanks was passed to the Cork Chemists' Social committee who had forwarded a donation of £60 towards the Fund. MR. COSTELLO (treasurer) said that contribution was particularly welcome, as he had observed with some concern that grants made in recent months were exceeding income, which meant that the Fund was using its capital. He was giving consideration to ways and means of drawing the attention of pharmacists to the fact.

MEDICAL ABSTRACT

MORPHINE PLUS TETRAHYDROAMINACRINE

NARCOTIC side-effects encountered during morphine therapy may be controlled by concurrent administration of a partial antagonist of morphine, the commonest example being amiphenazole. Stone, Moon and Shaw (*Brit. med. J.*, 1961, **I**, 471) describe the use of an alternative antagonist, tetrahydroaminacrine (THA), in treating intractable pain of carcinoma. They list four advantages of THA over amiphenazole: (a) it is a more reliable antinarcotic agent and respiratory stimulant; (b) it does not interfere with sleep, as may amiphenazole; (c) it is chemically stable and may be prepared in the same ampoule as morphine; (d) its anticholinesterase activity sometimes enhances the analgesic action of morphine.



Paracelsus:

A REAPPRAISAL

LESLIE G. MATTHEWS

ANYONE who studies the writings of Paracelsus and examines the many books written about him must echo the words of Walter Pagel: "A turbulent and paradoxical figure in his lifetime, Paracelsus has remained controversial ever since." His was a restless life—searching for the unattainable, continually in conflict with the accepted ideas of his time, frequently shattered and cast down but never admitting defeat. This was the man who, according to Hofer, seemed at certain times the most pitiable of men devoted to science, yet who showed an admirable insight into its problems. Whether he achieved ultimate satisfaction from his life-work is highly problematical, but that he stirred men's minds as few others of his time is certain. If it was true that he was often "sober in the morning but drunk in the evening," and if nevertheless he recorded all his thoughts exactly as they occurred to him, he may have had what is now described as a split personality. Indeed, that seems to be the view that his contemporaries took of him.

Name and Lineage

Of the names by which he is known—Phillipus Aureolus Theophrastus Bombastus Paracelsus von Hohenheim—various explanations have appeared. Theophrastus was most likely a baptismal name, while the two former he gave to himself. Baumast, Bambast or Bombast derived from his father's background: a Swabian family that had been ennobled. (The adjective "bombastic" does not derive from Paracelsus though his language was turgid enough at times.) "Paracelsus," greater than Celsus, he adopted for himself fairly late in his career, when his books were beginning to have a ready sale. His father, William von Hohenheim, practised medicine in the Swiss village of Villach, near a mining district, and it was there that Paracelsus was born and brought up. There seems even now some doubt about the date of his birth, either 1493 or 1494, but it is known that his early education was under the guidance of the Church. His father's interest in science, and particularly in chemistry, led to the boy's becoming apprenticed to mining, but his apprenticeship could not have lasted many years, since he soon developed a wanderlust that hardly left him during his whole life. From one university to another he went, finally settling to a course of study in medicine at Ferrara, Italy, where he completed his studies if he did not actually graduate (there is considerable difference of opinion about that point, though Paracelsus himself claims that he did). His wanderings took him far afield, even to England,

he says, though it is difficult to get corroboration of the claim. Unconventional as he was in his studies and in his professional life, he did—there is no doubt—serve as an army surgeon in the Low Countries and in Scandinavia.

But there were always for him the conflicting or competitive pulls between medicine, science and the life of the ordinary man. He was against the rôle of the physician as a superior being in the healing hierarchy. Paracelsus disliked the theorising that, as Copeman points out, distinguished so many physicians of the Tudor period in England, when the surgeon was regarded merely as a tradesman of no particular standing. The circumstances must have been similar on the Continent, for one of the first attacks that Paracelsus made upon the profession was concerned with the low status of the surgeon, with the over-theorising about disease by physicians, and with the grave neglect of the patient as a person needing to be helped, not simply a "case" to be discussed at large.

What there was in the early "cures" effected by Paracelsus—or rather in the elements by which he attained a reputation for singularly successful results—when so many of the accepted forms of treatment had failed is not clear. Partly it may have been his use of unusual remedies and partly that, as he says, he gave thought to the patient as a person needing help, and on that account watched closely both dosage and effect, as distinct from slavishly following the text-books. There is no doubt that his successes, together with his outspoken views against the conservative opinion of established authority, gained him enemies in high and influential places.

So often the sequence of events seems to have been first, unusual cures by Paracelsus, a clamour by the people for more of them, then an outburst by him against the local medical men, councillors or university teachers, resulting in their natural anger at his vitriolic criticisms, and finally a request, not always politely couched, that he should leave the city, if indeed he was not expelled from it. His friends had frequently to save him from the consequences of such conduct.

Supervision of Apothecaries' Shops

In Basle, where he secured a municipal appointment, one of his duties was analogous to that of the newly founded Royal College of Physicians in London, namely to supervise and visit regularly the apothecaries' shops in the city. In that capacity he made many enemies and Basle would have him for only a short period, notwithstanding that Erasmus and he became great friends. Again he was on the move—on the run, almost—this time to nearby countries. In Nuremberg, in 1529, he wrote his book on the treatment of syphilis, giving a warning—perhaps the first—about the grave dangers resulting from mercurialism. His work on that subject was followed by one that was to make his name more famous—the *Paragranum*—in which he laid down four bases as a requisite for the practice of medicine: the physician must have a right feeling, a right mental make-up, an appre-

ciation of man's place in, or relation to, the universe, and a knowledge of chemical medicines. "A good physician must be a born Physician," he says elsewhere, "a life-long calling must be innate . . . medicine is an art that will survive until the Last Judgment."

The urge to do good was ever-present with him. It is clear from his philosophical writings that he saw himself as a leader of thought — a missionary, not only medical but spiritual—though he writes: "I am not an apostle or anything like an apostle but a philosopher in the German manner." Jacobi (translated by Guterman), claims in reprinting many of his philosophical, even religious, writings, that Paracelsus was "the dauntless, never-weary seeker after God" and says that he "reflects those values which are and always will be indispensable to our Christian civilisation."

The doctrine of similars is one that he proclaimed: "When a medicine is found that accords with the star, when hot is applied against hot and cold against cold, this accords with the arcana" (mysterious, supernatural qualities hard to define). There never was a hot disease cured by "cold" and *vice versa*. In all things there was a poison and there was nothing without a poison. It depended only on the use of a substance whether it was a poison or not. Since the fit manner of preparing medicines was not to be found in pharmaceutics, it must be explored further, i.e., one must learn from alchemy. Paracelsus was greatly attracted to the part that alchemy ought to and could play in the preparation of medicine . . . "for the separation of the pure from the impure that you may obtain a pure, flawless remedy." There was much more to be done than the mere compilation of a book of recipes: that was a simple matter. The true physician had to possess something of magic in his make-up and develop esoteric powers, depending on his knowledge of the arcana, the occult healing substances. Secrets were revealed to him who sought with a purpose. The *quinta essentia* could only be extracted from the perceptible and could cleanse a man's life. A substance could have varied powers according to its manner of preparation. Knowing that, says Paracelsus, quoted by Holmyard (from Sherlock's translation of the Paragranum) "the doctor then sheds light on the matter, for he knows the cause, and with it the manner of cooking and preparing. But what light do you shed, you doctors of Montpellier, Vienna and Leipzig? About as much light as a Spanish fly in a dysentery stool!"

"Complexions" of the Elements

In his "Mysteries of the Creation" (English translation by H. Pinnell) Paracelsus discusses the nature and properties as well as the "complexions" of the elements, distinguishing between the natural fire, water, etc., each forming a "mysterium" of its own. What the alchemist knew and used in his laboratory as true chemical substances Paracelsus regards as possessing additional qualities. His description of them and of the ideas associated with them are sometimes clothed, says Pagel, "in a cobweb of fancy." Each disease is endowed with its particular "body." (Into these fields of metaphysics each scholar must seek his own path: the material is to be found in the numerous volumes of Huser and Sudhoff.) Paracelsus developed many theories, now discredited, but all part of his search for that indefinable "something" that was to bring blessing to mankind and cure his disease. "Magie" was for him a power of spiritual quality—that would enable the physician to heal by using the drug chosen with regard to those special virtues that can be found only by the most diligent seeking. In writing of "Signatures" Paracelsus stresses the need to examine the shape or colour of a herb, since those have an affinity with the diseased part of the body, for example, eye-bright is obviously of importance in the treatment of eye disease. The theory held its place for a great part of the seventeenth century, as witness the Herbal of Gerarde and other herbals of that period.

The customary use of uroscopy he questioned. He was the first to demand a chemical examination, as distinct from the

viewing that had been the common practice, and though he may have read the results wrongly, his original work gave impetus to those who followed him, for example, Van Helmont, early in the eighteenth century, and led to the modern type of urine analysis, which has proved so valuable. His early experience as an apprentice in the mining industry never left him: he remembered the hard days there and the plight of the miners. Thus it was that he came to write on mining as an occupational disease, and on "miner's lung," and in doing so made medical history. Few aspects of therapeutics failed to attract him at one time or another. The virtues of spas and baths fascinated him, so much that he made a study of the curative value of many of them, recognising that it was not merely the water itself that benefited the patient, but that the dissolved salts in the water were the distinguishing feature that determined the effect upon the patient. That led him to write many pamphlets on the subject.

Demand for Evidence

To encourage interest in chemical medicines, Paracelsus at first ridiculed the physicians and apothecaries of his day, who prepared their medicines by the "old wife" method. He demanded that they should employ the laboratory techniques of the alchemist—distillation, extraction, calcination, etc., with which he had long been familiar. He was full of praise for those who did so, and it was that warm commendation, more than his ridicule, which had a lasting effect in stimulating the use of chemicals in medicine. To Paracelsus is owed, indeed, the later development of pharmaceutical chemistry. To touch on his "Great Surgery," which found a ready sale, and the many tracts and pamphlets he issued on a variety of subjects outside chemistry and medicine, would call for a short volume at least.

To Salzburg, where he had suffered the first set-back in his professional life, he returned, dogged by poverty to the end, to die on September 24, 1541. He bequeathed to the poor the few things he had about him. Three years before his death his portrait had been painted by Hirschvogel. It showed a man of high intelligence, completely bald except for a few fringing locks, with lined face yet with a steady gaze into the future. Whatever his demerits, and he had many, his single purpose was the good of his fellows. Though a "self-willed genius," mixing pagan mysticism with Christian ethics (and in some of his later years he devoted himself to preaching in isolated villages), he remained essentially a son of the Church. Never at a loss for words, his rate of dictation was said to be phenomenal. In contrast to other medical writers of his day, he used colloquial German, not Latin, as his medium. His enthusiasms as physician, chemist, philosopher or preacher knew no limits, and in the last ten years of his life his output may be described only as colossal. "The grandiloquence (of the man) is typical: Paracelsus had virtues but modesty was not of them, and he would have had no need for a publicity agent." (Holmyard.) He was a rebel, but a rebel with a purpose. Though he founded no school of thought (his readers took opposing sides too often for that) he had enthusiastic followers not only on the Continent but also in England, where translations and commentaries on his writings were numerous in the seventeenth century. He continues to excite the curiosity and interest of the historian of chemistry and medicine.

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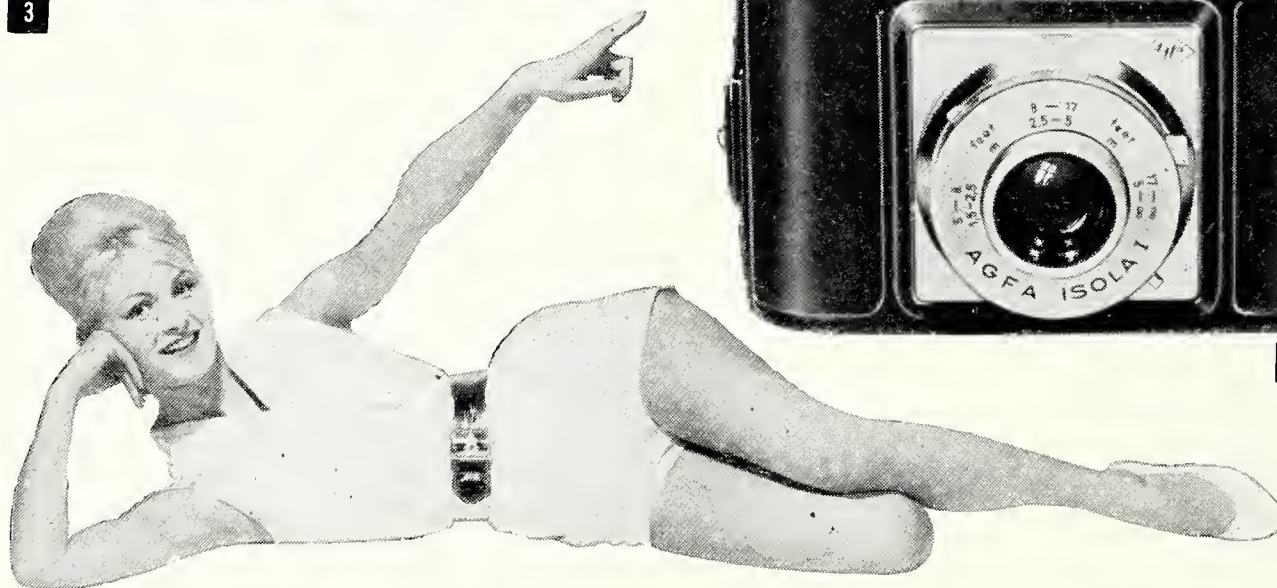
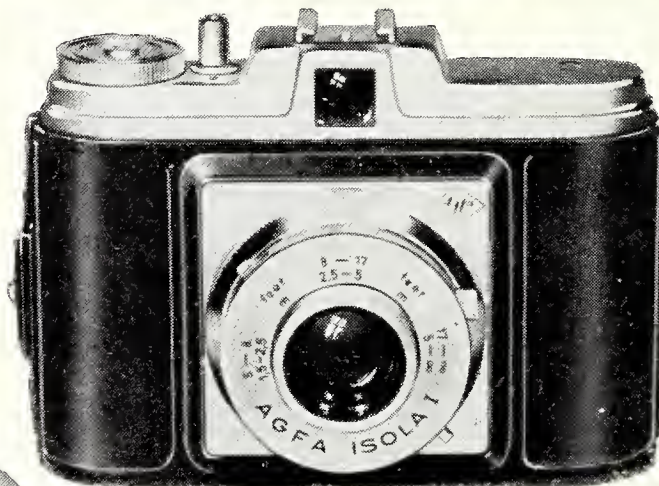
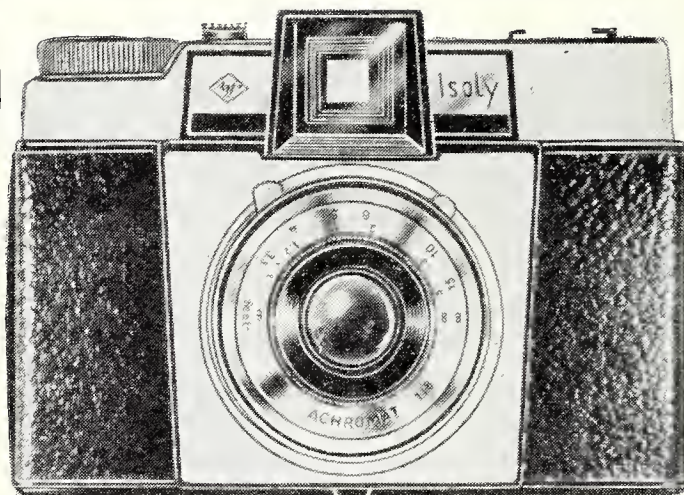
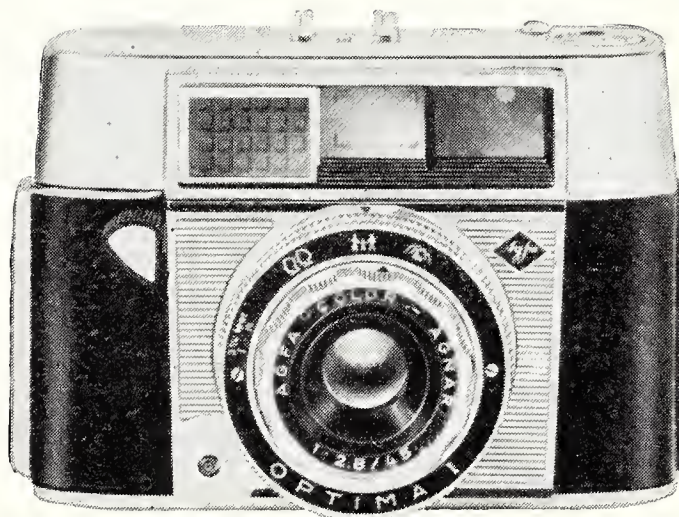
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The Man for the Job

THE recent three-day symposium on sterilisation organised by the Pharmaceutical Society and Smith and Nephew Research, Ltd., was an acknowledged success. Informed and authoritative contributors—including experts from as far afield as Germany and the United States—presented detailed, up-to-date accounts of techniques, applications and apparatus from the various fronts of the warfare against bacterial contamination. The subsequent discussions and questions—invariably on a thoughtful and stimulating level—were no less well informed or, on occasions, authoritative! As one speaker pointed out, the keynote was "variety." One question, however, tacit or implied, was never far from the surface. The question, which was variously formulated, "whose job is it to sterilise?" and "who is the best man for the job?" It was, in fact, mooted more than once, but remained largely unanswered. Professor Berry, who took the chair at the final session, staked an impassioned claim for the pharmacist: "If the modern, trained pharmacist has not got the technique and the knowledge for the control of sterilisation processes, I have wasted the last twenty-five years of my life teaching pharmaceuticals to students." Alas, Professor Berry's conviction of the pharmacist's pre-eminent prerogative in this field is not a matter of general agreement. Dissident views were voiced at the same symposium. Nevertheless, the case of the pharmacist is a good and cogent one, and should be vigorously contended. If it is lost, his status will be impugned and jeopardised. This is an issue which, through apathy, should not be allowed to go by default.

The Budget and Exports

WHETHER the Budget proposals introduced by the Chancellor of the Exchequer on April 17 (see p. 394) were welcome or not must depend largely on individual circumstances. But to those upon whom the burden of increasing Britain's exports rests, and after all it is upon their efforts that the country's standard of living ultimately depends, the proposals must have been extremely disappointing.

Bearing in mind the Economic Survey (*C. & D.*, April 15, p. 377), which stated "Endeavours by Government and industry to foster the growth of the economy will succeed only if they are designed to improve the country's competitive power" and also the Chancellor's opening remarks in his Budget speech, which gave as one of his objectives "to encourage investment and

leave room for increased exports . . .", exporters may well be excused for asking how his proposals are going to help them in the year ahead. If in the past they have been able to match competition from those countries which do not bear the same measure of crippling taxation that the United Kingdom businesses must shoulder, they must expect their overheads to increase (and, of course, their competitive power to diminish) as a result of this Budget, for industry is called upon to bear a much heavier burden. The twopence per gallon tax on fuel oils, the increased profits tax, the increased licence duties on motor vehicles, will all add to the cost of exports which in turn will add to the difficulties of being competitive in overseas markets. Perhaps the only proposal made by the Chancellor of direct help to the exporter is the abolition of the stamp duty on Bills of Exchange, which at present is one shilling per £100 or part of £100 and represents an addition to the cost of Bill financing of just under $\frac{1}{4}$ per cent. per year in the case of the standard three-months' Bill. The change to a fixed duty of twopence should make acceptance credit more competitive with bank overdrafts and help to reduce the cost of financing export trade.

On the home front we are perturbed at the proposal that the Treasury be given power to increase, or decrease, the amount of purchase tax or excise duty up to a maximum of 10 per cent. of that otherwise due. We are of the opinion that such a free hand ought not to be delegated, since the Treasury would be able to alter, without warning, the price of nearly everything in the pharmacy and, when it so desires, change it back again a few months later with the usual scant regard to the retailer's (and wholesaler's) problems that are concomitant with purchase tax amendments.

Oral Poliomyelitis Vaccine

AN attenuated poliomyelitis virus was first given to man for the purposes of immunisation in 1950. Since then oral poliomyelitis vaccine has come to be widely used; by 1960, for example, it was estimated that throughout the world about 70 million doses of vaccine had been administered. In Britain the use of oral vaccine has been limited to clinical trials, but recently attention has been directed to the oral method by the report that the Ministry of Health may sanction the adoption of its use in epidemic conditions (see p. 393).

Oral poliomyelitis vaccine consists of attenuated living poliomyelitis virus. Three distinct strains of attenuated poliomyelitis virus have been employed in the preparation of vaccine. The Koprowski strains which were used in the Belgian Congo and in Poland; the Cox strains in large-scale field trials in Florida and West Berlin; and the Sabin strains. Laboratory tests in the monkey suggest that the latter strains are the most suitable for widespread vaccination. Sabin strains were chosen by the Public Health Authorities for the production of vaccine in the United States and it is vaccine prepared from those strains which is available in Britain. Three types (1, 2 and 3) of attenuated virus are included in the vaccine.

In discussing the indications for oral vaccination it has to be borne in mind that the killed Salk vaccine in current use has proved to be very effective. Protection after adequate Salk vaccination probably exceeds 90 per cent. and may be more than 95 per cent. following four doses. However, despite its general efficacy, Salk

vaccine has imperfections. Failures after vaccination are not unknown, more particularly with the type 3 component. Moreover, adequate vaccination requires three inoculations and more may be needed to produce long-lasting immunity. This naturally reduces the proportion of the community who become effectively protected. A further disadvantage is the presence of small amounts of extraneous protein and antibiotics which may occasionally give rise to reactions. Vaccination of infants under six months—desirable when poliomyelitis vaccine is given in conjunction with other immunising agents—is unsatisfactory with the Salk vaccine in general use today. However, despite those disadvantages, there is no doubt that Salk vaccination is a safe and effective method of preventing poliomyelitis. Clearly the oral method requires to possess substantial advantages if its introduction is to be seriously considered.

With regard to the general protective effects of the oral vaccine, evidence of efficacy has come from two sources; a number of detailed studies of the capacity of the vaccine to produce antibody, and large-scale investigations in which the incidence of poliomyelitis in vaccinated and control groups has been compared. All reports indicate that oral vaccination gives adequate protection. Especially noteworthy are the studies in Russia where in 1959 some 1,700,000 children were vaccinated. In regions where the vaccine was widely used the usual seasonal rise in the incidence of poliomyelitis failed to take place, while poliomyelitis occurred with its anticipated frequency in control regions where the vaccine was not used.

Oral vaccination is unique in that the virus multiplies in the gut of susceptible persons and spreads among the community to those not previously vaccinated. Spread of the virus is most likely in the summer, in conditions of poor hygiene and in young children; in communities with good social conditions, in adults and during winter spread is less common. Spread of the vaccine virus to unvaccinated persons represents a radical departure from accepted immunological practice. Among the issues concerned is the possibility that the virus might revert from its attenuated form to a more virulent type. However, the likelihood of reversion seems to have been over-emphasised in the past; in practice such reversion does not seem to have been a factor of importance in the large number of vaccinations, so far carried out. After vaccination with Sabin strains there is general agreement that reactions have been insignificant and there is no evidence that poliomyelitis has ever been induced.

An important consequence of the oral vaccination of susceptible persons is the development of local resistance in the gut. Local resistance induced by vaccination protects against the establishment in the gut of pathogenic virus acquired by natural infection and in this way prevents the excretion and spread of the pathogenic poliomyelitis virus. The general protection to the individual produced by oral vaccination, coupled with its capacity to prevent the carrier state, are factors which would make oral vaccination of special value in epidemics. Moreover, the dual protective effect of oral vaccine suggests the possibility that widespread vaccination of successive generations of children might banish poliomyelitis from certain communities. This would not be possible with Salk vaccine, which does not influence resistance of the gut to poliomyelitis virus.

The temporary establishment of the vaccine virus in

the gut, which is necessary for effective vaccination, may be partially or completely prevented by the presence of other enteroviruses. In areas where such enteroviruses are highly prevalent, e.g. some tropical communities, this interference may limit the scope for an oral vaccine. The extent to which interference will affect the use of oral vaccine has not yet been fully explored; the problem may possibly be overcome either by vaccination at a time of year when enterovirus infection is uncommon or by increasing the dose of the vaccine sufficiently to overcome the interference. The phenomenon of interference has been exploited in one epidemic where the feeding of a single type of oral vaccine virus prevented the establishment of a natural poliomyelitis virus of a different type, and justifies the hope that epidemics of poliomyelitis may be rapidly halted by widespread oral vaccination.

Interference is not confined to the effect of vaccine virus on pathogenic virus, but occurs also between the three types of attenuated virus components which constitute the vaccine. To prevent this interaction and provide adequate protection, the three types may be given separately at intervals of several weeks. The order so far recommended for routine use being type 1 followed by type 3 and finally type 2. Other combinations are continually under trial and it is likely that the most suitable regime for one situation may not be the best one for another. Similarly, the best dose of vaccine in terms of virus content seems likely to vary in different conditions.

The vaccination procedure with oral vaccine is very simple. A common practice is to mix the dose of virus with a pleasant tasting syrup. A variety of media have been successfully used as vehicles for vaccination; in Russia, for example, the dose of vaccine has been given in the form of candy. The simplicity with which the vaccine can be administered is in contrast to the inoculations required by the Salk regime—an aspect of considerable importance to countries where skilled medical personnel are scarce. A possible limiting factor to the use of the vaccine in tropical countries, however, may be the transport and storage of the oral vaccine, which requires to be kept in refrigerated conditions. In Britain vaccination without injections is likely to increase the acceptance rate, a circumstance which of itself would improve the efficacy of any poliomyelitis vaccination campaign. Oral poliomyelitis vaccine is the simpler and cheaper to produce and the cost of mass vaccination schemes with the simple vaccination methods employed with oral vaccine are likely to be relatively low.

Finally, the results so far available suggest that the difficulties encountered in vaccinating infants under six months against poliomyelitis—a useful procedure when a multiple antigen is employed—can be overcome by using oral vaccine.

Taking all these considerations into account, it seems that we have on the one hand Salk vaccine, a well-tryed and effective method of poliomyelitis vaccination, and on the other a new vaccine with which we in Britain have less experience, but which clearly carries exciting possibilities for the control and perhaps eradication of poliomyelitis. When new vaccines appear it is wise to make certain of their safety and efficacy before advocating their widespread use; nevertheless, much experience of oral poliomyelitis vaccination has been gained elsewhere and the decision of our own Ministry to use oral vaccine if required will be commended.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN

THE IMPACT OF THE NEW HEALTH CHARGES

Council's letter to Ministry of Health

THE secretary and registrar of the Pharmaceutical Society of Great Britain was instructed by the Council to draw the attention of the Minister of Health to the results of the procedure which he suggested should be adopted by pharmacists when doctors prescribed items costing less than 2s. on the National Health Service. That instruction was given at the meeting of the Council held at Mallinson House, Queen Square, London, on April 11 and 12. The Public Services Committee had reported the receipt of a reply from the Ministry of Health to a Society's letter of February 8. The reply referred to the explanation given by the Minister in the House of Commons about the reasons for meeting part of the rising cost of the National Health Service in that and other ways. It also stated that, as in 1956, the Minister was concerned that the increased prescription charge should not give rise to difficulties for either chemist or patient, and that he understood that with the co-operation of chemists and of the public the difficulties which were feared in 1956 were comparatively few. It was agreed at that time that it was not part of a chemist's duty to advise on medicines prescribed by the doctor and that a patient who raised such questions should be referred to his doctor. That remained the position. The notice supplied for exhibition in chemists' premises announcing the increase in the charge made it clear that the money received went towards the cost of the Health Service. The letter also dealt with the arrangements made for avoiding hardships. The Committee recommended and the Council agreed that the following reply by the secretary and registrar be sent to the Ministry.

Text of Letter

I am asked by the Council of the Society to thank you for your letter of March 13 and to say that they appreciate the consideration that the Minister has given to the points raised. The Council, however, regret that the experience which has been gained of the operation of the new charge has not led them to modify their views. The Council particularly wish me to draw your attention to the effects of the procedure which the Minister expects should be followed when the price of an item is less than 2s.

The first point concerns the Minister's reference to the "retail price" given in reply to a question in the House on March 6. This would normally be understood by the public as the price which would be charged for the article if sold in an ordinary retail transaction, that is without a prescription. While the Minister's replies to questions at subsequent sittings in the House made it clear that he did not mean this but intended that the price should be what would be charged if the article were dispensed privately, this explanation has gained little currency among the public and the medical profession.

Secondly although the procedure relates only to articles which are in the Minister's opinion not dispensed medicines, this distinction has not been made clear by the Minister in public statements, nor if it had been made clear would it be a distinction which the public would appreciate. If an article is included in a prescription it is all the same to the public whether it is a "dispensed" article or not, in the sense in which the Minister used the term, and consequently they expect that any prescribed article is subject to the procedure.

It is relevant here to recall that in 1955 when the Ministry proposed to issue guidance as to the limits of their authority under the National Health Service to persons other than pharmacists who contract to supply pharmaceutical services, the Society expressed its disagreement with this distinction. It took the view that the definition of dispensing in the Pharmacy and Poisons Act, 1933, should be applied. This in effect means that dispensing is supply on prescription irrespective of the terms in which the prescription is written or of the article prescribed.

As a result of the misunderstandings to which the Minister's statement has given rise, difficulties have occurred in the relations between pharmacists on the one hand and doctors and

the public on the other. Presumably the Minister intended that the initiative in offering an article at a price lower than 2s. should come from the pharmacist and not from either the patient or the doctor. However, that is not how things have worked out in practice, and seriously embarrassing situations have arisen on this account. Doctors have told patients that certain articles can be bought for less than 2s., when this has not been the case. As the Minister has himself said there are very few articles which when supplied as dispensed articles would cost less than 2s., which incidentally shows what little practical value there is in the procedure. Doctors cannot be expected to know what the price of a dispensed article would be when supplied privately, and it is not surprising therefore, that mistakes have been made. A further difficulty has been caused by the fact that statements made by patients about what the doctor has told them are not necessarily correct. It is impossible to clear up these matters satisfactorily in every case and there is liable to be some element of belief left in the mind of the patient either that the doctor is ill-informed or that the pharmacist is charging too much, a situation which can only impair the confidence which ought to exist between the three parties.

Again difficulty arises when a patient who has several items on a form asks which is the least important. To answer this question would be to act contrary to the professional relationship between pharmacist and doctor. It is easy to say as the Minister has, that when such a question is asked the patient should be referred back to the doctor but this cannot always be done without prejudice to the patient, and in any case is bound to cause delay and may well be regarded with resentment by the patient and the doctor.

There is no doubt that any procedure which implies that the cost of a prescribed article can be a factor determining whether the article should be supplied on prescription creates serious confusion, places the doctor and pharmacist in an invidious position, may involve a breach of professional relationship between the pharmacist and the doctor and undermines the public confidence in both professions.

If the 2s. charge is to remain the Minister should make it clear that the charge is in no way related to the cost of the prescription. He should emphasise the fact that it is a payment which does not affect the normal relations between patient, doctor and pharmacist involved in the prescribing and dispensing of medicines and medical and surgical appliances.

Although the Minister says that these relations are not affected by the procedure he expects to be followed it is inevitable that they should be and the only way to put the matter right is for him to withdraw the procedure and to state that it would be improper for the issue of cost to be raised by patient, doctor or pharmacist. The Council will be glad to learn that the Minister has seen his way to act accordingly.

Auditors

The secretary and registrar reported that thirteen members had accepted nominations as candidates for election to the Council (see *C. & D.*, April 15, p. 367), and that Mr. Andrew Medcalfe had been nominated but had not accepted nomination. He also reported that the following members had accepted nomination for election as auditors:—Messrs. H. Treves Brown, London; A. Forsyth, Edinburgh, J. C. Hanbury, Ware, Herts, Sir Harry Jephcott, Greenford, Middlesex, and L. G. Matthews, London.

The Council adopted a recommendation for alterations to the by-laws to provide (a) for the registration as pharmaceutical chemists without examination of graduates in pharmacy of universities in the United Kingdom in accordance with the power conferred upon the Council by Section 4 of the Pharmacy Act, 1954; (b) for the fee payable on registration as a pharmaceutical chemist to be £5 5s.

A number of inquiries having been received from pharmacists in South Africa about the future of the agreement for the reciprocal recognition of qualifications on South Africa leaving the Commonwealth, the Council agreed that

an announcement be made that the agreement would not be affected by that withdrawal.

The Council adopted a recommendation that William Murphy Griffiths be designated as a Fellow of the Society under By-law Section III (2) (b).

It was reported that particulars had been received of more than one hundred displays on pharmacy as a career which would be arranged to take place during Commonwealth Technical Training Week.

The Education Committee reported the receipt of minutes of meetings of examiners and teachers in pharmaceuticals, in physiology and pharmacology, in pharmaceutical chemistry, and in pharmacognosy. The meetings had been called to discuss matters of common interest particularly in connection with the three-year course for the Pharmaceutical Chemist Qualifying examination.

A letter was received from Dr. M. F. Lockett tendering her resignation from the Board of Examiners for England and Wales. Council agreed that a reply be sent expressing appreciation of her past services.

The Benevolent Fund Committee reported that legacies of £200 each had been received from Mrs. Olive Lottie Sangster and Mrs. C. P. Harley. Mrs. Harley was the widow of the late Mr. David Harley, chairman of the North British Executive from 1933 to 1935. THE PRESIDENT referred to the contribution from Mrs. H. L. Buckingham, who had given the money in memory of the late Mr. H. L. Buckingham and of their son. He had sent a telegram of good wishes to Mrs. Buckingham on her 90th birthday.

Grants were made to six widows and two members; from the War Aid Fund a grant was made to one widow. One grant was made from the Orphan Fund.

A gift from Mrs. Yeoman, widow of Mr. Cyril Yeoman, of a silver medal awarded to her husband in July 1903 by the Metropolitan College of Pharmacy was reported. Mrs. Yeoman's original suggestion was that it might be sold for the benefit of the Benevolent Fund but she had accepted the suggestion that the medal should be kept in the Society's collection as an interesting and valuable addition. It was agreed to send Mrs. Yeoman a letter of thanks.

The Council agreed to an amendment to paragraph 2 of Section XVI of the by-laws to enable changes to be made in the Model Rules for Branches without an alteration in the by-laws.

It was reported that a letter had been received from the Guildford and District Branch explaining that in May 1959 an appeal had been made to local pharmacists for the cost of a window in the new cathedral at Guildford and inquiring whether the window might incorporate the arms of the Society in colour. The Council had agreed that while the Society had no power to give permission, it would not object to the reproduction of the Society's arms in this way.

The subcommittee appointed to examine claims arising from flood damage in the latter part of 1960 submitted its report. Seven grants totalling £3,632 were approved. It was reported that as a result of the recent appeal 2,322 subscriptions had been received for a total of £4,459.

The Finance Committee recommended the appointment of two representatives to attend a meeting called by the Law Society to consult with other professional bodies with a view to making further representations to the Board of Inland Revenue to obtain some relaxation of the rules governing expenses allowable under Schedule "E."

BRANCH AND ASSOCIATION EVENTS

READING

Standards

TRIBUTE to the standards guarded by chemists, whom he described as "an ever-present help in trouble," was paid by SIR JOHN WOLFENDEN (vice-chancellor of Reading University), at the annual banquet and ball of the Reading Branch of the Pharmaceutical Society, recently. Proposing the toast of the branch, Sir John spoke of the discipline and obligations implicit in the profession. The public, who benefited from the professional training of chemists, he said, appreciated the high standards they jealously observed. "We know we can rely on those standards and that we need never have any misgivings or second thoughts about your profession. We owe much to you." Sir John referred to the Pharmaceutical Society's 110 years of life, and pointed out that the Reading Branch itself had been in existence for about thirty-five years, which was comparable, he said, to the age of Reading University. Replying to the toast, MR. K. REED (the branch chairman) said that the branch had held many professional and social meetings during the year and they had been well attended. "The Guests" were toasted by MR. H. WILLIAMS (secretary).

ENFIELD

Aerosols

THE use of aerosols was increasing rapidly in the field of pharmaceuticals, insecticides, deodorants, cosmetics and foods, said MR. J. PICKTHALL (Polak & Schwarz, Ltd.), when he addressed the Enfield Chemists' Association on March 20. Mr. Pickthall considered that the

applications of aerosols were limitless, particularly in the field of medicine, where their convenience and sterility were assets. In food aerosols, which were widely used in America, the propellant was an inert gas (usually nitrogen) that did not mix with the contents. In toilet aerosols the propellant was a low-boiling-point liquid which was mixed in with the preparation. The propellants were mixtures of halogenated hydrocarbons, such as trichloro- and dichloro-fluoromethane. On release of the valve, the contents were forced out and the propellant vaporised instantaneously, leaving the active ingredients in the form of a fine mist, the size of the mist particles being determined by the mixture of propellants used and the pressure in the can. The greatest use of aerosols was as deodorising air fresheners. Mr. Pickthall explained that odours were very fine particles in the air, and the aerosol particles combined with them by both chemical and physical means. A wide range of materials were used for aerosol containers, including stainless steel, aluminium, plastics and glass. Great care had to be used in coating metal containers, which were vulnerable to chemicals under pressure. The speaker also mentioned the use made of aerosols in fire-fighting appliances. With liquid propellants, pressure always remained in the can, and empty containers should not be put on a fire.

WEST HERTS

Local Talent in Evidence

FEATURES of the annual dinner of the West Herts Branch of the Pharmaceutical Society, held at St. Albans on March 28, were a "This is Your Life" sketch in which a Mr. M. P. Hess,

personified with grey-wigged dignity by MR. J. E. ANDERSON, recounted highlights in the career of an imaginary pharmacist of, one supposes, Victorian date of registration; and a Dutch auction from which the auctioneer, MR. KEITH JENKINS, painlessly raised much more for the Society's Benevolent Fund than current shop values of a bottle of whisky and a box of liqueur chocolates. Guests of honour of the Branch were Dr. G. E. M. BENSON (chairman, St. Albans division, British Medical Association) who proposed the toast "The Pharmaceutical Society" and DR. HAROLD DAVIS (chief pharmacist, Ministry of Health) who replied. Dr. Davis said his invitation had been received before the introduction of the 2s. prescription levy, which had raised questions of doctor/pharmacist relationship that were engaging much time in consideration by the Society's Council. The matter was one that the Ministry considered should be settled between the two professions and which it would aim to keep right out of. "The Guests" was proposed by the branch chairman (MR. J. R. GOLDTHORPE) who presided at the dinner, and for whom the toast had additional meaning because they included his three charming grand-daughters, MR. P. G. FLOOD responded.

HULL

"Pharmaceutical Birthrights"

"PHARMACISTS should realise what the public generally expects from a chemist shop and endeavour to impress them as advisers of medicine and on all matters dealing with health." That was the opinion of MR. A. ALDINGTON when he spoke at a joint meeting of Hull Branches of the National Phar-



C&D artist at
WEST HERTS BRANCH
DINNER & DANCE
 28th MARCH 1961

CHIEF PHARMACIST
 MINISTRY OF HEALTH
DR. HAROLD DAVIS CBE
 "A PHARMACIST IS A VERY
 INTELLIGENT PERSON
 AND WILL GIVE THE
 PATIENT SOMETHING"

J.R. GOLDTHORPE
 PRESIDENT
 WEST HERTS
 BRANCH

U.M. WILYMAN
 TREASURER

AND
MRS. DAVIS

DISTINGUISHED GUESTS

ROGER BARRETT
 SECRETARY

DR. G.E.M. BENSON
 CHAIRMAN, ST. ALBANS BRANCH B.M.A.
 PROPOSED THE PHARMACEUTICAL
 SOCIETY OF G.T. BRITAIN

JOHN COX
 SOCIAL SECRETARY

BARN
 DANCES
 ETC

MRS. WEBB

VICE-
 CHAIRMAN
 CHIEF
 PHARMACIST
 ST. ALBANS
 CITY
 HOSPITAL

J. EDWARD ANDERSON
 WITH HIS CLOSEST
 FRIEND M.P. ESS

KEITH JENKINS
 PAST
 CHAIRMAN

MRS. EDWINA HARRISON

GEORGE DYSON

**CHINESE
 PHILOSOPHY**



maceutical Union and the Pharmaceutical Society in Hull recently. He said the status of the pharmacist should be reflected in his pharmacy. His displays, both in the windows and inside the shop, should be characteristic and distinctive at all times and a major portion of the display space should be devoted to medicinal products. Mr. Aldington referred to the inception of the National Health Service in 1948, when, he said, many considered the era of true pharmacy had arrived. Others, however, realising that income was from a single source, decided to keep counter trade going and not rely solely on N.H.S. receipts. He described toiletries, dressings, tooth preparations, photographic goods, baby foods and products, hot-water bottles, brushes and accessories as "birthrights of pharmacy" but thought that, in general, those fields were being allowed, through neglect, to "drift." Mr. Aldington made reference to an address by Mr. H. S. Grainger (vice-president of the Pharmaceutical Society), in which he was reported as having said that "... the general public regarded the chemist as 'just another shop' and that the chemist's mental attitude often became that of just another shopkeeper." That showed, said Mr. Aldington, that Mr. Grainger had no knowledge of the attitude of the general public to the retail pharmacist, and also that he was unaware of the great value placed upon the services offered in the chemist shop and gratefully acknowledged by the general public. Retail pharmacy was certainly not moribund, but was in a process of development to the pattern of providing the comprehensive service expected of it by the public. The Society's Council had said that medicines should be available only through qualified channels of distribution, and were working to that end. The speaker thought that the future was with single pharmacy units, each large enough to carry two pharmacists.

LEEDS

Education and Ethics

MR. J. FARRER BARNES (a member of the Pharmaceutical Society's Council) addressed members of the Leeds Branch recently on "Pharmaceutical Education and Ethics." From the beginning of the century to the present day, he said, pharmaceutical development could be viewed in three stages. In the period 1900-1919 a four-year apprenticeship was usual. No preliminary examination was necessary and for a time there was no written examination. He considered that the pharmacists produced by that system were pioneers and good craftsmen with a sound knowledge of drugs. Between 1919 and 1939 it became necessary to pass a preliminary scientific examination before being registered as a pharmacy student. Either matriculation or the senior College of Preceptors examination was accepted for that purpose. There was a two-year or three-year apprenticeship, and the first and second Parts of the Chemist and Druggist Qualifying examination could be studied full-time over a period of nine months. In 1929 that was changed to one year for each Part. Pharmacists were taught the art of manipulating and compound-

ing. They were taught how to meet people; they became good public-relations officers. But there was a snag—they were cheap labour.

Mr. Farrer Barnes went on to consider the third phase of pharmaceutical education, that period from 1939-61, when war intervened and pharmaceutical education was affected. Nowadays, he said, the G.C.E. with three subjects at A level was required as an entrance qualification, followed by three years' academic training and a one-year post-graduate apprenticeship and thus, in sixty years, pharmacists had changed from technicians to technologists. Training could be undertaken in a shop, hospital, or with a manufacturing chemist. There was a certain amount of reluctance on the part of retail proprietors to take on post-graduate students. What was to be the purpose of that academic training? The hospital pharmacist was "truly professional" and ran none of the financial risks facing the proprietor pharmacist. He should be a man outstanding in work and personality and able to meet specialists and doctors for the purpose of discussing old and new drugs and their preparations. For the future, the speaker thought that there would be a reduction in the number of pharmacies.

Turning his attention to pharmaceutical ethics, the speaker said the matter was an individual responsibility of the pharmacist to his profession and the public. Branch groups should be formed to study the subject. Blatant advertising gave the impression that the pharmacist was more interested in commercialism than in his professional status.

WEST MIDDLESEX

Dr. Capper on the B.N.F.

SUBJECT of an address by DR. K. R. CAPPER (director of the Pharmaceutical Society's Department of Pharmaceutical Sciences) to the West Middlesex Branch of the Pharmaceutical Society on March 21 was "The 1960 British National Formulary and how this differs from other Editions." Dr. Capper said that the Formulary had to be of practical use, not only to pharmacists but to the medical profession, and it was sometimes difficult to produce a volume that fulfilled those requirements and at the same time gave all the information each profession would like. On occasions a compromise had to be made. The Joint Formulary Committee, he said, was aware of that, but because the Committee consisted predominantly of doctors, it was sometimes difficult to avoid a medical bias.

The main object of the Committee was to produce a book of reliable and proven formulae and general information useful alike to doctors and to pharmacists in general practice, and to those in hospital. Hospital pharmacists often wished to make their own preparations, possibly in larger batches and with the help of mechanical aids, and that aspect of formulation had to be borne in mind. Dr. Capper stated that the B.N.F. was rapidly supplanting individual hospital pharmacopœias, and medical students were finding it an asset. That use, however, often gave the Committee food for thought, as the teachers wanted to justify every inclu-

sion on therapeutic grounds in order to meet any criticisms students might raise. On the other hand the medical practitioner wanted formulas included which experience had proved satisfactory. Problems arose when old and trusted formulas were deleted for reasons of deterioration on storage, therapeutic value or loss of popularity. The pharmacist was inclined to require a formula for every item a doctor might prescribe, and a compromise had to be made in that respect. The pharmacist, however, did insist that if possible a formula should be capable of being prepared extemporaneously, have a reasonable shelf life, and dose, and that storage and quantity directions be given to assist him when the doctor omitted those matters.

The speaker believed it to be undesirable to specify the type of container. That could and should be left to the knowledge and discretion of the pharmacist. The alternative edition to the Formulary, arranged according to therapeutic use, had proved useful in 1957, but had not appeared as a companion to the 1960 edition. The inclusion of prescribers' notes, lists of equivalents, approved names, simplified D.D.A. and Schedule 4 references was, the speaker thought, good and useful. The desire to include proprietary equivalents often gave rise to difficulties, particularly if there existed two similar products which differed only in colour. To assist the pharmacist, and to avoid overstocking through duplication, the Committee endeavoured to avoid including too many formulas for the same group of drugs or with little therapeutic difference. Generally, if a formula appeared in the Pharmacopœia or B.P.C., it was, if possible, accepted for inclusion in the B.N.F. Compounds for colouring B.N.F. preparations had given rise to difficulties, particularly in respect of drug testing, and the dyes had been reclassified by the Ministry of Food into three categories which varied from safe to dangerous. The Committee had appreciated the difficulty the pharmacist would experience, but the solution was made no easier when all blue dyes previously used in the B.N.F. were described by the Ministry of Food as unfit for human consumption. Each edition of the B.N.F. was bound in a cover of different colour so as to avoid possible confusion.

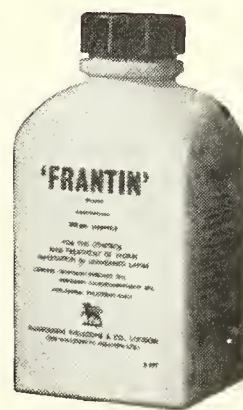
BLACKPOOL

Diabetic Evening

THE films "Living with Diabetes," "The Wellcome Story" and "Urine Testing for Diabetics" were shown at a joint meeting of the Blackpool Branch of the Pharmaceutical Society and the Blackpool branch of the British Diabetic Association on February 23. The films were introduced by MESSRS. J. F. BUCHANAN and W. A. CARLISLE, who answered questions on them and on the display of pharmaceutical and dietary products also on show, which was arranged in co-operation with Burroughs Wellcome & Co., John Knox (Stoke-on-Trent), Ltd., Boots Pure Drug Co., Ltd., and Miles Laboratories, Ltd. The attendance at the meeting was over ninety, and was presided over by Mr. J. R. Parkinson.

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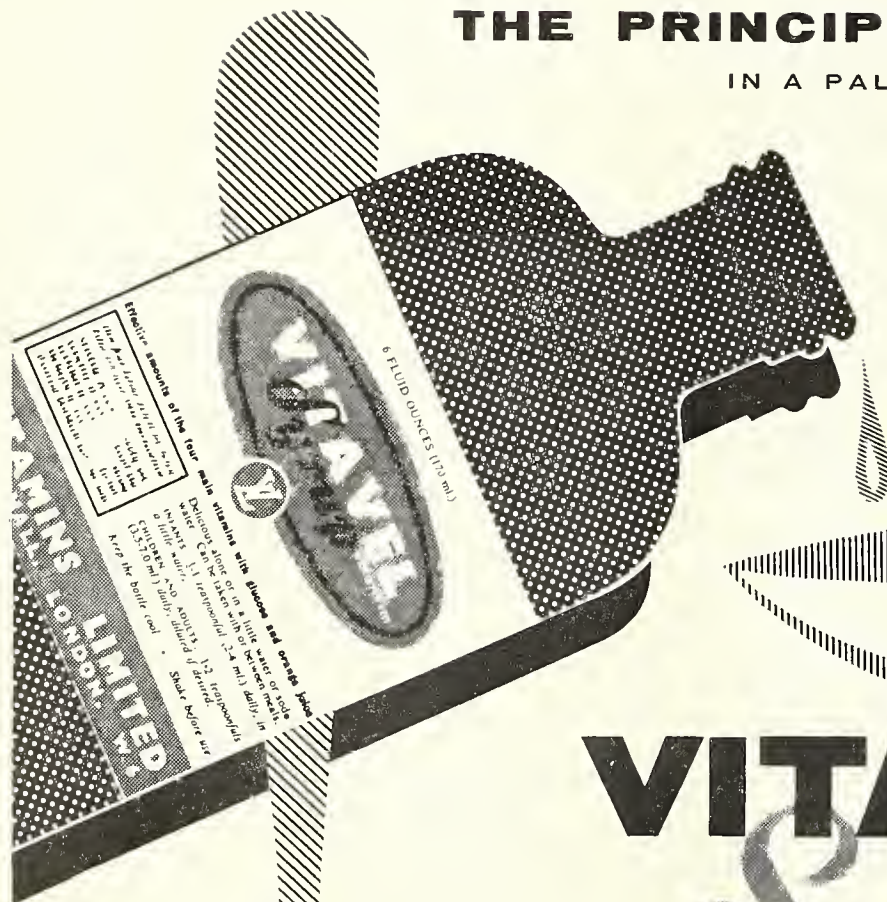
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TRADE REPORT

The prices given are those obtained by importers or manufacturers for bulk quantities or original packages. Various charges have to be added whereby values are in many instances augmented before wholesale dealers receive the goods into stock. Crude drugs and essential oils vary greatly in quality and higher prices are charged for selected qualities.

LONDON, APRIL 19: Quiet but steady trading conditions prevailed in the CRUDE DRUGS market during the week. Most commodities remained firm and in tight supply.

Offers of new crop CASCARA, that is 1961 peel, were received during the week, the price being 230s. per cwt., c.i.f. Russian triple-sifted LYCOPodium is unobtainable on the spot but there is some Indian of medium quality offered at 11s. 6d. per lb. Chinese MENTHOL was again easier both spot and forward by one shilling per lb. but in the case of Brazilian only the shipment value was fractionally easier. Shipments of Tinnevely SENNA from the port of Tuticorin during March were:

	U.K.	U.S.	EUROPE
SENNA LEAVES	—	75	14
PODS	—	3	18

ANISE continued its firmer tone among ESSENTIAL OILS, the spot price being marked up by ninepence per lb. BOIS DE ROSE was easier by threepence on the spot following lower offers for shipment. Lower also were Brazilian PEPPERMINT in both positions and Formosan CITRONELLA for shipment. On the other hand, LEMONGRASS was threepence per lb. dearer.

There were no changes notified by manufacturers of PHARMACEUTICAL CHEMICALS during the week. An announcement was made during the week by a manufacturer of ACETIC ACID that it was to use part of the production to make MONOCHLORACETIC ACID and SODIUM MONOCHLORACETATE. Both chemicals, which are at present available only from overseas, are used in hormone weedkillers, detergents, pharmaceuticals, etc.

The duty on HYDROCARBON OIL proposed in the Budget (p. 396) has put the coal tar industry and Government officials in a quandary as to what is and what is not to be charged with the tax. It may be some days before the scope of the duty is fully defined. Large quantities of tar are produced as by-products in the coke ovens of the gas and steel industries, and these are then distilled into other chemical products. These products include creosote, which can be blended with pitch to form a fuel oil, and this would presumably be subject to the new duty.

Other important tar products are naphthalene and anthracene, which are not used as fuel oils but are important raw materials for the chemical industry. If these were made subject to the duty, this would add substantially to the chemical industry's costs, and would perhaps encourage the use of raw materials based on petroleum instead of coal.

Pharmaceutical Chemicals

AMIDOPYRIN. — Minimum rate, 20s. 1d. per lb. with usual differentials for smalls. AMPHETAMINE. — One to 10-kilo lots: BASE, from 140s. to 160s.; SULPHATE, 110s. to 130s. and *d*-AMPHETAMINE SULPHATE 405s. to 420s.

AMYLOBARBITONE. — B.P.C. is 82s. 6d. per kilo for less than 25-kilo lots and SODIUM, B.P.C., 92s. 6d. per kilo.

ATROPINE.—Rates for 16-oz. (500 gm.):

	per oz.		per kilo	
	s.	d.	s.	d.
ALKALOID	39	0	1375	0
METHONITRATE ..	39	0	1375	0
METHYLBROMIDE ..	38	6	1357	0
SULPHATE	34	0	1198	6

BARBITONE. — Less than 25-kilo lots, 53s. 6d. per kilo. SODIUM derivative, 56s. 9d. per kilo.

BISMUTH SALTS. — Prices (per lb.) in packages over 2-lb.:—

	1 cwt. 28 lb. to		1 cwt.		5 cwt.	
	s.	d.	s.	d.	s.	d.
CARBONATE	20	6	20	0	19	6
SALICYLATE	20	3	19	9	19	3
SUBGALLATE	19	9	19	3	18	9
SUBNITRATE	18	6	18	0	17	6

The AMMONIUM CITRATE is 55s. per lb. and SODIUM TARTRATE, 35s. in cartons for 28-lb. lots.

BUTOBARBITONE. — B.P.C., 87s. 6d. per kilo in less than 25-kilo lots.

COCAINE. — 16-oz. lots, HYDROCHLORIDE, 91s. 6d. per oz.; ALKALOID, 101s. per oz. Subject to D.D.A. Regulations.

CYCLOBARBITONE. — Less than 25 kilos: B.P.C., 73s. per kilo. CALCIUM, 85s. per kilo.

GLYCERIN. — Pharmaceutically pure (s.g. 1.2627):—

Annual purchases or spot lots of	Under 1 cwt.		1 cwt. and under 5-cwt.		5-cwt. and under 1 ton		1 ton and under 5 tons		5 tons and under 25 tons	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Per cwt.										
DRUMS										
14-lb.	281	0	276	0	272	6	268	0	265	6
28-lb.	279	0	274	6	270	6	266	0	263	6
56-lb.	275	0	270	6	266	6	262	0	259	6
TINS										
1-cwt.	—		254	6	250	6	246	0	244	6
2½-cwt.	—		251	6	248	0	243	6	242	0
5-cwt.	—		—		247	6	243	0	241	6
10-cwt.	—		—		246	6	242	6	241	0

For 25 tons and upwards the price is from 265s. 6d. to 240s. as to containers. Bulk deliveries in tank wagons from 362s. to 237s. 6d. Technical grade glycerin s.g. 1.2627 is 5s. per cwt. less than above.

HEXAMINE.—B.P., 1s. 11½d. per lb. for 1-ton lots, delivered in 1-cwt. kegs. Technical is threepence per lb. less.

HEXOBARBITONE. — 25-kilo lots or over, 115s. per kilo.

HYDROCYANIC ACID.—Dilute B.P.C., from 3s. 2d. to 4s. per litre, as to quantity; Scheele's from 3s. 10d. to 4s. 9d.

HYDROQUINONE. — One-cwt. lots, 11s.; 1-ton, 9s. per lb.

HYOSCINE HYDROBROMIDE.—Per oz., 102s.

IODIDES. — (Per kilo). Potassium, 50-kilo lots 19s. 3d.; SODIUM, 24s. 3d. for 25-kilo lots, AMMONIUM, 45s.

IODINE.—Resublimed in less than 50-kilo lots, 25s. 4d. per kilo. Minimum delivered rate for CRUDE is 17s. 4d. per kilo.

IODIFORM.—Powder (per kilo), 51s. 6d. in 50-kilo lots; less than 50-kilos, 53s. Crystals are 3s. per lb. more.

IRON SALTS.—GLUCONATE, B.P.C., 6s. 3d. per lb. in 1-cwt. lots; SULPHATE, B.P., crystals, 9½d. per lb. in 28-lb. lots: 1-cwt., 57s. 6d. per cwt., 5-cwt., 52s. 6d. per cwt.; SULPHATE EXSICCATED, 1s. 5d. per lb. for 28-lb., 1-cwt., 123s.; 5-cwt., 113s. per cwt.,

1-cwt. fibre kegs free. Other packages extra. PHOSPHATE, B.P.C., 28-lb., 3s. 6d. per lb.; 1-cwt., 3s. 3d. PHOSPHATE, SACCHARATED, B.P.C., 28-lb. lots are 3s. 9d. per lb.; 1-cwt. 3s. 6d. OXIDE RED PRECIPITATED, B.P.C., 1949, 1-cwt., 2s. 1d. per lb.; CARBONATE, SACCHARATED, B.P.C., 1949, 28-lb., 3s. 3d.; 1-cwt., 3s. AMMONIUM CITRATE, scales, 4s. 4d., granular, 3s. 6d. per lb. (5-cwt. lots). AMMONIUM SULPHATE, 1-cwt., 1s. 10d. per lb. QUININE CITRATE, 2s. 1d. per oz. in 100-oz. tin.

ISOPRENALINE SULPHATE. — (Per gm.), 100-gm. lots, 1s. 6d.; 500-gm., 1s.; 1-kilo, 9d.

LACTOSE. — B.P., in 1-ton lots packed in 1-cwt. paper-lined sacks, £129 10s. per ton, delivered in the United Kingdom.

LEAD ACETATE.—B.P. crystals, 225s. per cwt.

METHADONE.—Subject to D.D.A. 16s. 3d. per 5 gm. pack.

OPIATES.—Home trade prices (per oz.) subject to D.D.A. Regulations:—

	35 oz. and over		Under 35 oz.	
	s.	d.	s.	d.
CODEINE				
PHOSPHATE	41	0	42	0
HYDROCHLORIDE ..	47	3	48	3
SULPHATE	47	3	48	3
ALKALOID	54	0	55	0
MORPHINE				
ACETATE	50	0	51	0
HYDROCHLORIDE ..	50	0	51	0
SULPHATE	50	0	51	0
TARTRATE	60	0	61	0
ALKALOID	61	3	62	3
ETHYLMORPHINE				
HYDROCHLORIDE ..	54	0	55	0
ALKALOID	63	3	64	3
DIAMORPHINE				
ALKALOID	54	9	55	9
HYDROCHLORIDE ..	59	9	60	0

PENTOBARBITONE. — Under 25-kilo lots, 125s. per kilo; SODIUM, 130s.

PETHIDINE HYDROCHLORIDE. — Subject to D.D.A. Regulations, 229s. 2d. per 250 gm.

PHENACETIN.—B.P. one-ton lots, 6s. 3d. per lb.; 1-cwt., 6s. 6d.

PHENAZONE.—Imported, 9s. 6d. per lb.

PHENOBARBITONE. — Spot rate 50-kilo lots, 47s. 6d. per kilo; 5-kilos, 50s. 6d. 500-gm., 54s. 6d. SODIUM SALT unchanged at 55s. 6d. per kilo for 5-kilo lots.

PHENYTOIN SODIUM.—One-cwt. lots, 23s. per lb.; less than 56-lb., 25s.

PIPERAZINE.—(50-kilo lots), ADIPATE, 22s. per kilo; CITRATE, 20s. 6d.; HEXAHYDRATE, 17s.; PHOSPHATE, 23s.; TARTRATE, 22s. 6d.

PROCAINE HYDROCHLORIDE.—100-kilo lots, 45s. per kilo.

QUINALBARBITONE.—Under 25-kilos, 130s. per kilo.

SAL PRUNELLA.—Balls, 3s. 10d. per lb. in 1-cwt. lots.

SALICYLAMIDE.—One-cwt., 6s. 3d. per lb.; 5-cwt., 5s. 11d.

SANTONIN.—5-kilo lots, 400s. per kilo (11s. 4d. per oz.).

SILVER SALTS.—PROTEIN, 1-cwt. lots, 8 per cent., 36s. 3d. per lb.; VITELLIN, 68s. 6d.

SULPHACETAMIDE.—One-cwt. lots, 24s. 6d. per lb. SODIUM derivative, 30s.

SULPHAGUANIDINE. — One-cwt. lots, 11s. per lb.

SULPHANILAMIDE. — One-cwt. lots, 6s. per lb.

SULPHAPYRIDINE.—Five-kilo lots, 120s. per kilo.

SULPHOCARBOLATES.—SODIUM PHENOSULPHONATE, B.P.C., 1949 (powder), 5s. 6d. per lb. in 1-cwt. lots and ZINC, B.P.C., 1949 is 5s. 6d.

Crude Drugs

ACONITE.—Spot: Spanish *napellus*, 2s. 6d. per lb.

BALSAMS.—Per lb.: CANADA: Spot, 22s. for paper-filtered. COPAIBA: Spot, 8s. 6d. duty paid. PERU: Spot, 9s. in bond. TOLU (genuine as imported) nominal; B.P., from 12s. 3d. to 17s. 9d. as to analysis.

BUCHU.—Spot new crop, 4s. 4d. per lb.; shipment, 4s., c.i.f.

CASCARA.—Spot, 1960 peel, 27s. per cwt.; shipment, 1961 peel, 230s., c.i.f.

CASSIA.—*Fistula*, 100s. per cwt.; *lignea* (whole), spot 420s., duty paid.

CHAMOMILE.—Belgian, 6s. 6d. to 7s. 6d. per lb. as to quality; Hungarian type, 6s. 6d.

CHERRY BARK.—Thin natural, 2s. 9d. per lb., as to holder.

CHILLIES.—Nigerian, 185s. per cwt. Mombasa, 350s.

CLOVES.—Zanzibar spot, 2s. 10d. per lb.; shipment, 2s. 7½d., c.i.f.

COCHINEAL.—Black-brilliant, 11s. 6d. per lb.; silver-grey 10s., spot; Peruvian silver-grey to arrive 4s. 6d.

COCILLANA.—Bark, 2s. per lb., spot; 1s. 8d., c.i.f.

COLOCYNTH PULP.—Spot, 2s. to 2s. 6d. per lb. as to quality.

DIGITALIS.—*Purpurea* for shipment, old crop, 11d.; new crop, 2s. 4d. per lb., c.i.f.

ELEMI.—Spot, 2s. 1d. per lb. Shipment, 1s. 11d., c.i.f.

FRANGULA.—Spot, 105s. per cwt.

GENTIAN.—Spot: French, 150s. per cwt.

GINGER.—African, spot, 150s.; new crop for shipment, 135s. per cwt., c.i.f. Jamaican No. 3, spot, 200s.; shipment, 190s., c.i.f. (new crop). Cochin, shipment, new crop, 115s., c.i.f.; spot, 140s. (per cwt.).

GUM ACACIA.—Kordofan cleaned sorts, 150s. per cwt., spot; new crop, April–May shipment, 133s., c.i.f.

HENNA.—Indian, spot, 87s. 6d. per cwt.; new crop for shipment, 62s. 6d., c.i.f.

HONEY.—Australian light amber, 102s. 6d. to 107s. 6d. per cwt. and medium amber 96s. to 98s. Argentine, 110s.; Jamaican, 115s. to 120s.; Canadian clover, 145s. to 150s., all ex warehouse.

JUNIPER BERRIES.—Italian, 90s. per cwt.; German, 130s.

KARAYA.—No. 1 gum, spot 325s. per cwt. nominal; No. 2, 220s.

KOLA NUTS.—Jamaican for shipment, 7d. per lb., c.i.f. African, 5½d. spot and 4d., c.i.f.

LANOLIN.—**ANHYDROUS** B.P., is from 170s. to 175s. per cwt. in 1-ton lots and **HYDROUS**, B.P., 150s., free drums, delivered.

LEMON PEEL.—Spot, 3s. 3d. per lb.

LINSEED.—Whole, 70s. to 75s. per cwt.; crushed, 105s.

LIQUORICE.—Natural root; Persian on the spot, 40s. per cwt.; other varieties cleared: Anatolian decorticated, 175s. Block juice: Anatolian from 190s. per cwt.; Italian stick from 392s. to 470s. per cwt.

LYCOPodium.—Indian 11s. 6d. per lb., spot. Russian not quoted.

LOBELIA HERB.—American spot, 8s. 9d.; shipment, 8s. 3d., c.i.f., per lb. Dutch not offering.

MACE.—Whole pale blade, 23s. 6d. per lb. spot.

MENTHOL.—Chinese: spot, 85s. per lb., duty paid; shipment, 76s., c.i.f. Brazilian, 52s. 6d., in bond; shipment, 51s., c.i.f. Formosan, 54s. in bond.

MERCURY.—About £67 per flask of 76-lb.

NUTMEGS.—West Indian 80's 12s. per lb., spot; sound unassorted, 9s. 3d.; defectives, 6s. 9d.

NUX VOMICA.—Indian quoted at 80s. per cwt., c.i.f.

ORANGE PEEL.—Spot: Sweet ribbon 2s. per lb.; bitter quarters: West Indian, 1s.; Spanish, 1s. 3d.; bitter ribbon, 1s. 3d.

PAPAIN.—Tanganyikan, 14s. 6d. per lb., c.i.f., for grade one; spot 15s. Ceylon brown, 14s. 6d.

PEPPER.—White Sarawak, spot, 3s. 8d. per lb.; April shipment, 3s. 7d., c.i.f. Black Sarawak, spot, 3s. 1d.; shipment, 3s., c.i.f. Black Malabar, 420s. per cwt. spot, and 350s., c.i.f.

PEPPERMINT.—Dutch whole leaves, 3s. per lb., c.i.f.

PIMENTO.—Spot, 590s. cwt.; shipment, 540s., f.o.b.

PODOPHYLLUM.—*Emodi*, 190s. per cwt., spot; shipment not quoted. *Peltatum*, 375s.

PYRETHRUM.—Extract, minimum 25 per cent. w/w pyrethrins, 75s. per lb. for small lots.

QUILLAIA.—Ex wharf Hamburg, 145s. per cwt.; shipment not offering.

RHUBARB.—Chinese small rounds from 5s. 9d. to 6s. 9d. per lb. on the spot.

SAFFRON.—Mancha selecta, 147s. 6d. per lb.

SARSAPARILLA.—Jamaican native red spot, 2s. 7d. per lb.; shipment, 2s. 3d., c.i.f.

SEEDS.—(Per cwt.). **ANISE.**—Spanish, 200s. nominal, duty paid. **CARAWAY.**—Dutch, 165s., duty paid. **CELERY.**—Indian, 150s. paid spot; new crop June–July 134s., c.i.f. **CORIANDER.**—Moroccan are in short supply at 130s. to 135s., quoted duty paid. **CUMIN.**—Indian, 180s., spot; Iranian, 180s., duty paid. **DILL.**—Indian, 100s. spot; shipment, 81s., c.i.f., quoted. **FENNEL.**—Indian, 120s., spot; Chinese, 105s., duty paid. **FENUGREEK.**—Moroccan sold at 75s., duty paid; shipment, 59s. 6d., c.i.f. **MUSTARD.**—English, 65s. to 95s., according to quality.

SENEGA.—Spot, 21s. 6d. per lb.

SENNA.—*Tinnevelly* LEAVES, prime No. 1 cleared; f.a.q. No. 3, 9d. **PODS:** manufacturing (f.a.q.), 9d. and hand-picked, 1s. 5d. to 1s. 10d. *Alexandria* pods: Manufacturing, 1s. 6d.

SHELLAC.—F.O.T.N., 202s. 6d. per cwt.; No. 1, 225s.; F.O., 235s. to 285s., spot.

SLIPPERY ELM.—Bark, 3s. 6d. lb. landed value.

SQUILL.—White 87s. 6d. per cwt., spot.

STRAMONIUM.—Indian LEAVES 60s. per cwt., spot. Dutch 0.5 per cent. alkaloid 93s., c.i.f.

STYRAX.—Spot, 28s. 6d. per lb., shipment, 26s., c.i.f.

TONQUIN BEANS.—Para spot, 6s. 6d. per lb. Shipment nominal. Angostura 11s.

TRAGACANTH.—No. 1 ribbon, £145 to £150 per cwt. No. 2, £135 to £140.

TURMERIC.—Madras finger on spot 110s. per cwt.; new-crop for April–May shipment, dearer at 90s., c.i.f.

VALERIAN ROOT.—Spot: Belgian, whole (max. 2½ per cent. sand) for prompt shipment, 145s., c.i.f. Dutch old crop cleared.

VANILLIN.—Rates (per lb.) are now:—5-cwt. lots, 22s. 3d.; 1-cwt., 22s. 6d.; 56-lb., 22s. 9d.; small quantities, 23s.

WAXES.—(Per cwt.). **BEES'.**—Dar-es-Salaam, spot, 460s.; shipment, 445s., c.i.f. Abyssinian, spot 390s. in bond; shipment 375s., c.i.f. Sudanese, spot, 410s.; shipment, 360s., c.i.f. **CANDELILLA,** spot, 465s. **CARNAUBA,** fatty grey, spot, 470s.; shipment, 435s., c.i.f.; prime yellow, spot, 675s., shipment, 622s. 6d., c.i.f.

WITCH HAZEL LEAVES.—Spot cleared; origin not offering.

Essential and Expressed Oils

ANISE.—Chinese, 8s. 3d. per lb., spot; shipment, 7s. 6d., c.i.f.

BOIS DE ROSE.—Brazilian, 14s. 3d. per lb. on the spot and 13s. 9d., c.i.f.

CAJUPUT.—Spot from 10s. per lb.

CAMPHOR, WHITE.—Chinese, 1s. 6d. per lb. in bond; 1s. 5d., c.i.f.

CARDAMOM.—From 330s. per lb. for English-distilled and 260s. for imported.

CEDARWOOD.—American rectified 8s. per lb. on the spot.

CHAMOMILE.—Small 800s. per lb.

CINNAMON.—From quillings, best English-distilled is 50s. per oz.; other B.P. oils from 165s. per lb. Ceylon leaf, spot, 9s. 6d. per lb.; Seychelles, 8s., spot.

CITRONELLA.—Ceylon, spot, 6s. 6d.; shipment, 6s. 3½d. per lb., c.i.f. Formosan, spot, 7s., in bond; shipment, 6s. 7½d., c.i.f.

CLOVE.—Madagascar leaf, spot, 7s. 6d. per lb., duty paid; shipment, 6s. 7½d., c.i.f. Rectified 87–88 per cent., 12s. Distilled bud-oil, English, B.P., 28s. for 1-cwt. lots.

CORIANDER.—B.P. oil, 52s. 6d. per lb., spot.

CUMIN.—Imported oil, 90s. per lb.; English-distilled, 120s.

EUCALYPTUS.—Spanish, 3s. to 3s. 6d. per lb. spot. Chinese, 3s. 3d., all duty paid.

GINGER.—Imported: Jamaican, 130s. per lb.; Chinese, 72s. 6d., duty paid.

JUNIPER.—B.P.C. 1949 oil is from 15s. per lb. on the spot. English-distilled, 150s. **JUNIPER WOOD,** from 5s.

LAVANDIN.—Spot from 7s. per lb. for original drums.

LAVENDER.—From 17s. to 50s. per lb. as to quality.

LAVENDER SPIKE.—Spanish, 12s. per lb. for original drums.

LEMONGRASS.—Spot, 16s. 6d. per lb., and shipment, 16s., c.i.f.

LIME.—West Indian distilled, 50s. per lb. on the spot.

ORANGE.—Spot quotations of sweet oil include Floridan at 3s. 6d. per lb.; West Indian, 3s. 6d.; Israeli, 7s. 6d., nominal; Californian, 5s. 3d. to 7s. 6d.

OTTO OF ROSE.—Bulgarian, 400s. per oz. Turkish, £350 per kilo.

PENNYROYAL.—Spot is firm at 15s. per lb., duty paid.

PEPPERMINT.—*Arvensis:* Chinese spot, 38s. 6d.; shipment, 37s. 6d., c.i.f. Brazilian spot, 17s. 6d.; afloat, 16s. 6d., c.i.f.; new-crop, April–May shipment, 16s. 3d., c.i.f. *Piperita:* Italian, 48s. per lb., spot. American from 30s. to 38s. per lb. as to make.

PETITGRAIN.—Paraguay, 18s. 3d. per lb., spot; shipment, 17s. 6d., c.i.f.

PIMENTO.—English-distilled berry 167s. 6d. per lb.; imported, 77s. 6d. Rectified leaf, 27s. 6d. per lb. for small lots.

PINE.—*Pumilionis* on the spot is 15s. per lb.; *sylvestris*, 5s.; Siberian (*abietis*), 15s.

RUE.—Spanish is 25s. per lb. spot.

SPEARMINT.—American oil on the spot 40s. per lb.

TANGERINE.—From 19s. to 28s. per lb. as to quality.

YLANG YLANG.—Spot, 37s. 6d. per lb.

UNITED STATES REPORT

NEW YORK, APRIL 18: Mexican VANILLA BEANS were higher by 15 cents at \$7.65 per lb. CARAWAY OIL at \$3.75 advanced 25 cents. Lower were PAT CHOULI at \$5.50 (down 25 cents per lb.) Bourbon GERANIUM at \$24 (down 50 cents) and the Algerian at \$23.50 (50 cents down).

OVERSEAS NEWS

CEYLON

Concern Over Drug Bill

MEMBERS of the Hospital Committee in Ceylon have expressed alarm over the "very heavy" expenditure involved in the issue of drugs to the Colombo group of hospitals. A committee member said that, at the next meeting, he would propose the appointment of a Drugs Committee to investigate all prescriptions issued from the out-patients department clinics. The medical officer in charge of a section of the General Hospital in Colombo has reported to the Director of Health Services a "fantastic increase" in the consumption of drugs. Prednisolone and antibiotics have, he said, been excessively consumed. Statistics for the period December 3, 1960, to January 3, 1961, showed that one clinic used 56,150 tablets of prednisolone and 1,956 of Terramycin, while the next highest user accounted for 726 tablets of prednisolone and 186 of Terramycin. Members of the Hospital Committee have discussed ways of combating traffic in drugs in the Colombo group of hospitals.

TURKEY

Health Scheme Proposals

A REPORT on the socialisation of health services has been submitted to the

Health Ministry by Sir John Charles (a former under-secretary to the British Minister of Health). At the invitation of the Turkish Government, Sir John has been working for the past three months on plans for a health scheme modelled on the British system.

UNITED STATES

Health Bill Before Congress

PRESIDENT Kennedy has asked the U.S. Congress to pass a bill that would provide (among other things) an initial sum of \$10 millions to improve nursing home services; \$75 millions a year for construction and improvement of medical and dental schools; scholarships for medical and dental students and for the over sixty-five's free hospital care for eighty-one days after paying the first \$10 a day for nine days. The extra cost would be met from increased subscriptions by employers and employees and would not place any burden on the general revenue, said the President in his message to Congress. He added: "It is a programme of prepayment of health costs with absolute freedom of choice guaranteed. Every person will choose his own doctor and hospital." The President said nothing about freedom of choice in the selection of the pharmacy to have prescriptions dispensed.

For muco-protein preparations for therapeutic use (5)

STROMUCIN, 808,868, by Evans Medical, Ltd., Speke, Liverpool, 24.

For pharmaceutical products, being organic extracts for use in the treatment of degeneration of the joints (5)

RAMALON, 800,694, by Robapharm, A.G., Basle, 6, Switzerland.

For preparations of minerals and of vitamins for use in medicine and pharmacy (5)

IMPRADEC, 812,273, by Parke, Davis & Co., At the River, Detroit 32, Michigan, U.S.A., and Hounslow, Middlesex.

For drugs for pharmaceutical purposes (5)

MEP 4, MEP 2, 812,508-09, by Independent Research Laboratories, Ltd., London, W.C.2.

For medical and surgical plasters, all being adhesives, materials prepared for bandaging and dressings (5)

SALVELOX, 813,861, by Cederroth International, S.A., Geneva, Switzerland.

For lamps for medical, surgical and curative purposes (10)

WOTAN, 807,040, by Osram, G.m.b.H., Munich 2, Germany.

For surgical instruments and apparatus (10)

ARBURG, 814,632, by Arburg Feingeraetefabrik O. H. G. Hchl & Soehne, Wuertemberg, Germany.

From the "Trade Marks Journal," April 12

For chemical preparations for the treatment of exposed photosensitive materials (1)

UNIBATH, B810,277, by Cormac Chemical Corporation, New York, 11, U.S.A.

For non-medicated creams (being cosmetic preparations) for use on the skin (3)

EMOLAN, 786,352, by Emolan, London, N.4.

For preparations for the hair (3)

PERMA-STRATE, B798,904, by Permastrate Co., Memphis, Tennessee, U.S.A. KINAWAY, 808,686, by Perry Kurland Institute of Hair Culture & Design, London, W.1.

For hand creams (non-medicated) (3)

BELLIDIS, 804,979, by Biokosma Holding, A.G., Ebnat-Kappel, Switzerland.

For perfumes, cosmetics (not being toilet preparations), lipsticks and nail varnish (3)

WHISTLE STOP, 811,854, by Coty (England), Ltd., London, W.1.

For rinsing preparations for laundry use (3)

DOWNY, B812,993, by Thomas Hedley & Co., Ltd., Newcastle-on-Tyne.

For all goods (3)

DEXIL, 813,480, by Co-operative Wholesale Society, Ltd., Manchester.

For soaps, perfumes, non-medicated toilet preparations, essential oils, cosmetics, hair lotions and dentifrices (3)

BLUPON, 815,096, by Wella Rapid, Ltd., London, N.W.1.

For starch and preparations containing starch (3)

HOSPEX, 815,122, by Industrial Starch Co., London, E.C.4.

For pharmaceutical preparations for human use, all containing iron (5)

IROPERON, 801,464, by A.B. Astra, Apotekarnes Kemiska Fabriker, Södertälje, Sweden.

For pharmaceutical preparations and substances (5)

Devicc, 790,756, by Tobal Products, Inc., Chicago, 54, Illinois, U.S.A. MESILONE, 810,066, PANSILONE, 810,068, by Scaï Société Commerciale d'Applications Industrielles, Glarus, Switzerland. GEVODIN, 815,885, by Ed. Geistlich Söhne A.G., für Chemische Industrie, Wohlen, Switzerland.

For pharmaceutical preparations and substances for human and veterinary use (5)

SYNALAR, 806,567, ALARIN, 807,670, SUPOTEX, TOPILAN, METILAR, SYNANDONE, 807,673-76, by Syntex Corporation, Panama, Republic of Panama. SUPACORTAL, 815,751, by Winthrop Group, Ltd., Surbiton, Surrey.

For pesticides (5)

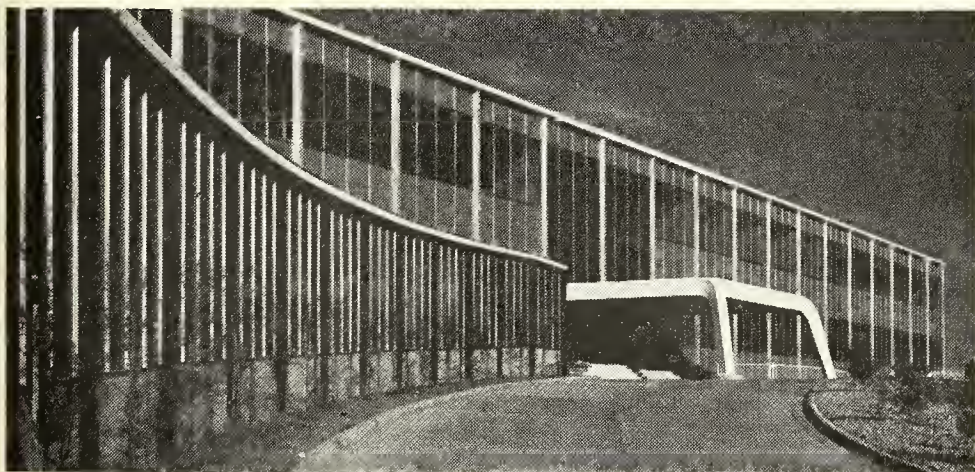
AVADEX, 808,197, by Monsanto Chemical Co., Saint Louis, Missouri, U.S.A.

For pharmaceutical preparations for use in the inhibition and treatment of sunburn (5)

GLOTAN, 810,307, by African Pharmaceutical Distributors (Private), Ltd., Hatfield, Salisbury, Southern Rhodesia.

For pharmaceutical, veterinary and sanitary substances and preparations (5)

KELAK, 807,198, by J. Knight (Pharmaceuticals), Ltd., Wigan, Lancs.



A COMPANY'S HEADQUARTERS: The factory of Nicholas Pty., Ltd., Ashwood, Melbourne, Australia.

TRADE MARKS

APPLICATIONS ADVERTISED BEFORE REGISTRATION

From the "Trade Marks Journal," April 5

For all goods (5)

CEPHORIN, 799,469, by Glaxo Laboratories, Ltd., Greenford, Middlesex. MOBILAT, 806,867, by Luitpold-Werk Chemisch Pharmazeutische Fabrik, Munich, 25, Germany. RAPENTON, 807,719, SPASAPIAN, 807,721, by C. H. Boehringer Sohn, Ingelheim-on-Rhine, 22b, Germany. SKEFRON, 813,997, by Smith Kline & French Laboratories, Ltd., Welwyn Garden City, Herts. WELLCOVAX, 814,930, by Wellcome Foundation, Ltd., London, N.W.1. NAROLEX, 814,696, by Boots Pure Drug Co., Ltd., Nottingham.

For pharmaceutical preparations and substances for human and veterinary use (5)

TRASICOR, 808,066, by CIBA, Ltd., Basle, Switzerland. VIRUTRIC, 808,442, CREOPAL, 810,688, by Winthrop Group, Ltd., Surbiton, Surrey.

For pharmaceutical preparations and substances (5)

QUIMALAN, 807,284, by Pharmacy Products (Overseas), Ltd., London, W.1. LISTICA, 815,195, by Armour & Co., Chicago, Illinois, U.S.A.

For all goods (1)

SKIL, B812,832, by May & Baker, Ltd., Dagenham, Essex.

For pharmaceutical preparations containing iodine and heparin (5)

DIOPARINE, 803,601, by "Fo-We" Forschung und Verwertungs-Anstalt, Vaduz, Liechtenstein.

For pharmaceutical preparations and substances for human and veterinary use; and sanitary substances and disinfectants (5)

FASCOCIDE, 808,088, by Imperial Chemical Industries, Ltd., London, S.W.1.

For medicinal preparations in tablet form for use in the treatment of acne (5)

ACNUTABS, 808,355, by Remedia, Inc., New York, U.S.A.

For preparations for killing weeds and destroying vermin (5)

BORDERMASTER, 808,504, by Farbenfabriken Bayer, A.G., Leverkusen 22c, Germany.

For deodorants (5)

PLASTAROM, 808,776, by Industrial Perfumes, Ltd., Brentford, Middlesex. FASTID, 809,644, by Edward Henry Godfrey Hope, Knutsford, Ches.

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BUDGET ANNOUNCEMENT

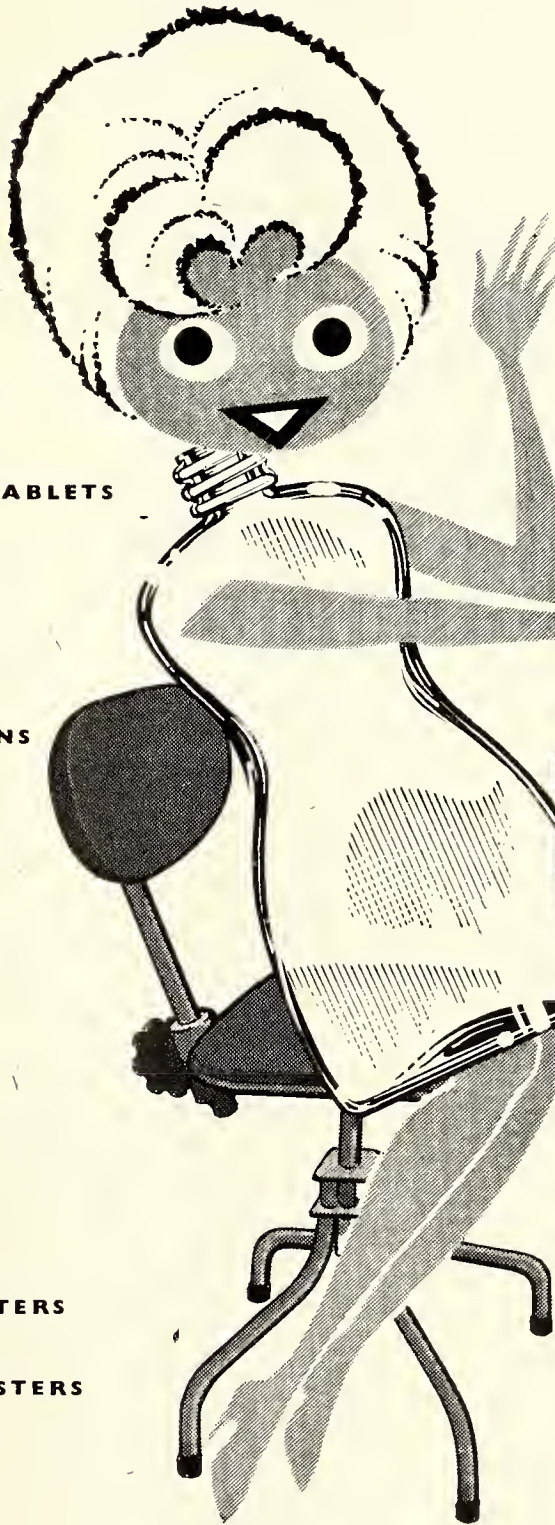
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£10	7½	43.8	44.3
£20	10	48.4	48.2
£40	12½	52.3	52.7
£100 and over	15	56.4	57.0

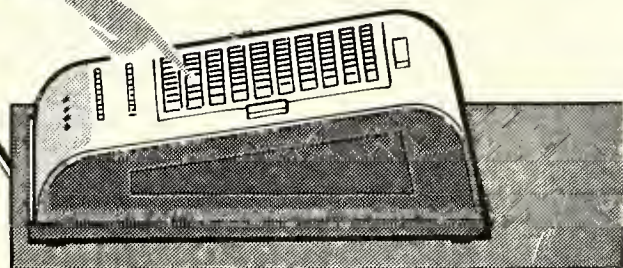
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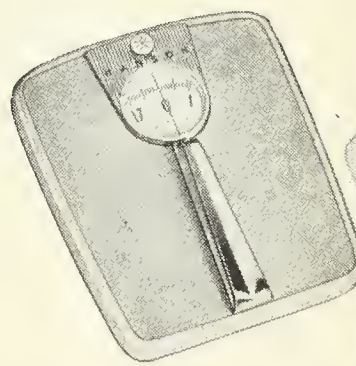
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COLOUR

for ALL your Photographic Customers★



★ **DEVELOPING—**

4/6d. per spool

CONTACT PRINT 1/6d.

En-print and Enlargement prices on application

And for your black-&-white customers:- The "STANDARD" SUPERCHROME PANCHROMATIC ROLL FILM.

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Proprietors: A. R. BOTT & SONS LTD., 15 LEAM TERRACE, LEAMINGTON SPA

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Vista-color film makes exciting full-colour prints at prices they can afford, that will please your customers and boost your sales . . .

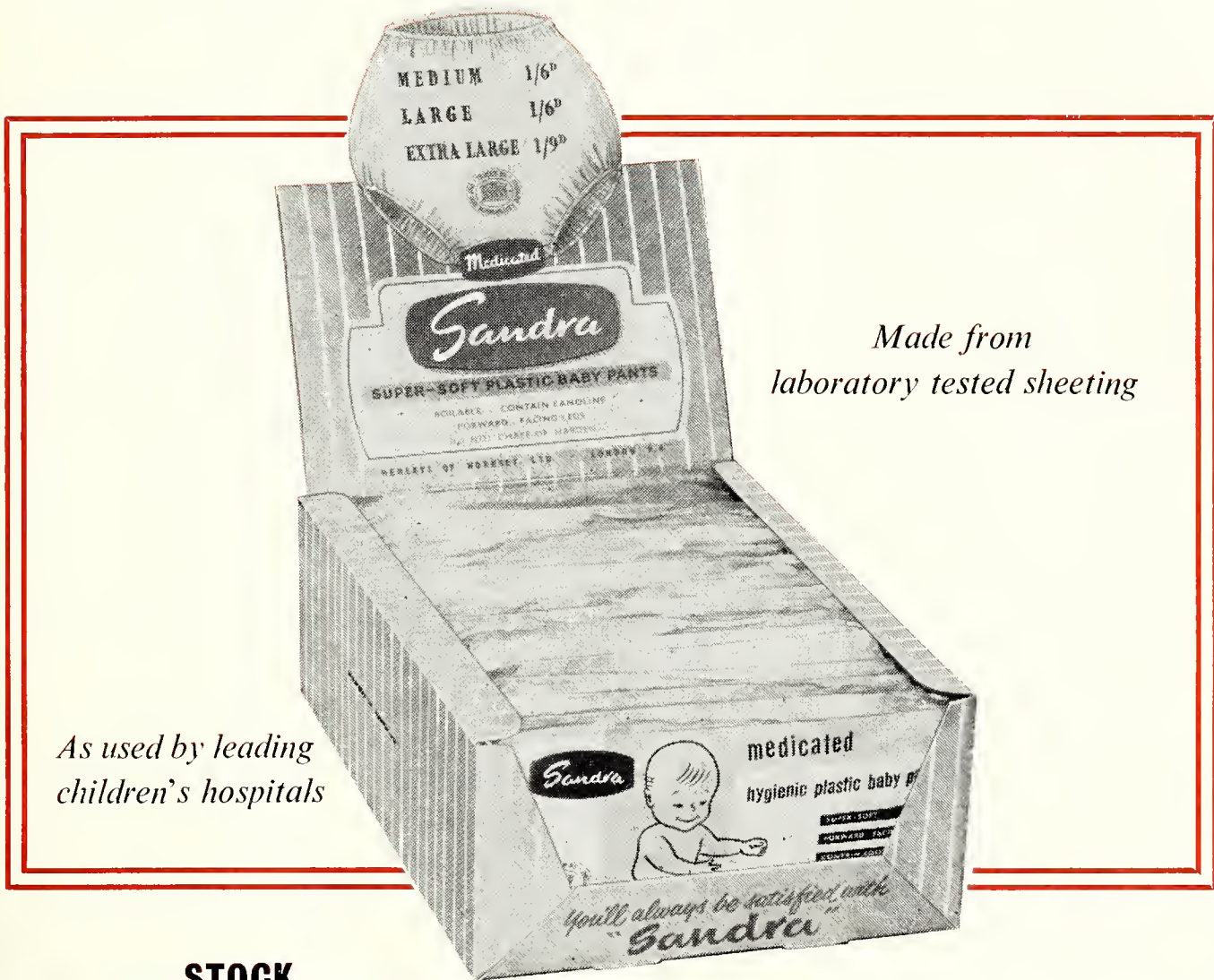
"VISTA" COLOUR FILM 26° SCH.

Catalogue Number	Exps.	Size (inches)	List Price	Retail Price
120	8	2½ × 3½	6/5	7/6
620	8	2½ × 3½	6/5	7/6
127	8	1½ × 2½	5/6	6/6

"STANDARD" PANCHROMATIC 33° SCH.

120	8	2½ × 3½	2/3	2/8
620	8	2½ × 3½	2/3	2/8
127	8	1½ × 2½	2/-	2/5

Announcing the very first Medicated Plastic Baby Pants -made exclusively by "SANDRA"



*Made from
laboratory tested sheeting*

*As used by leading
children's hospitals*

**STOCK
AND SAFELY RECOMMEND**



**MEDICATED
PLASTIC BABY PANTS**

Safety is the big selling feature of these new Super-soft *boilable* Baby Pants by "Sandra" containing a special bactericide to destroy dangerous bacteria. Laboratory tests have proved that "Sandra" Medicated Plastic Sheeting reduces harmful organisms forming on baby pants by more than 90%!

"Sandra" Medicated Baby Pants come to you in an eye-catching display outer that helps you to put across this safety feature to hygiene conscious mothers.

Medium and large 1/6 per pair. Extra large 1/9 per pair.

Rayon covered 2/9 per pair.

**AVAILABLE FROM YOUR USUAL WHOLESALER
OR DIRECT FROM THE MANUFACTURERS:**

HENLEYS OF HORNSEY LTD. Hornsey, London, N.8

Introducing

POTENT NEW SEARLE ANTIHISTAMINE FOR HAY FEVER

**PROVIDES BETTER SYMPTOMATIC CONTROL
EXTREMELY WELL TOLERATED OVER A WIDE DOSAGE RANGE
PRACTICALLY DEVOID OF SIDE EFFECTS**

In clinical trials, Mitronal gave moderate to complete relief in 399 of 546 (73%) patients suffering from hay fever.

Only 8.3% experienced side effects in a trial of 300 patients.

Drowsiness occurred in only 8% of 373 patients in another study.

**BOTH THESE PERCENTAGES FALL
WITHIN THE PLACEBO REACTION RANGE**

**THERE ARE NO KNOWN CONTRAINDICATIONS
TO MITRONAL**

SEARLE

MORE EFFECTIVE THERAPY

Mitronal, having a wide margin between therapeutic activity and the onset of side reactions, thus provides the physician with a better means of control of allergic disorders in both adults and children.

It is also a valuable alternative in patients who are unresponsive to or intolerant of other antihistamines.

DOSAGE: The usual dosage is 15 mg. three times a day. Up to 90 mg. daily may be given if necessary.

PRESENTATION: Supplied as a scored tablet containing 15 mg. Mitronal, in bottles of 50 and 250.

TRADE PRICE: Bottles of 50 tablets 7/6d. Bottles of 250 tablets 33/4d. Subject to Purchase Tax.

Mitronal is also recommended for such other indications as chronic allergic rhinitis, vasomotor rhinitis, cutaneous allergic disorders and vertigo.

MITRONAL

brand of cinnarizine

Order through your usual wholesaler

G. D. SEARLE & CO. LTD., HIGH WYCOMBE, BUCKS.



"The best all purpose insect repellent so far developed"

The United States Department of Agriculture

FLYPel
TRADE MARK

BRINGS YOU A

Bonus Offer

12 FOR THE PRICE OF 11

(available only from your I.C.I. representative).

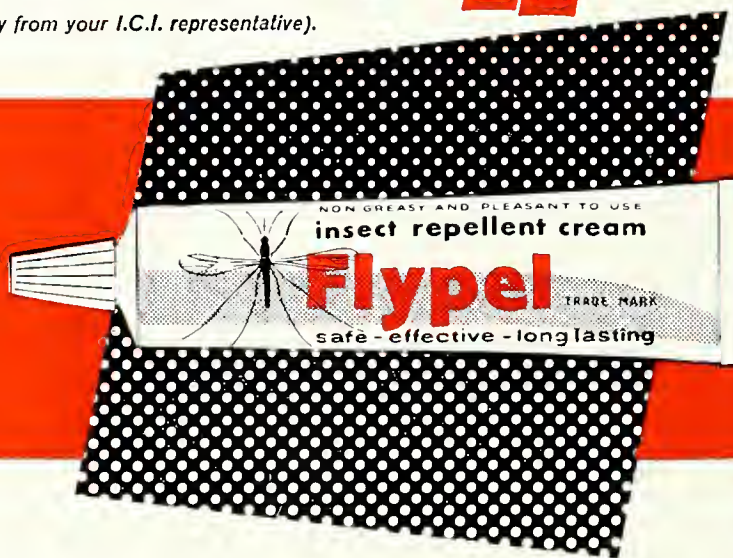
Bonus Terms

Trade Price per doz. 21/-
(Plus 5/3 P. Tax)

BONUS PRICE per doz. 19/3
(Plus 5/3 P. Tax)

RETURN ON RETAIL SALE
29/6 (Plus P. Tax)

YOUR PROFIT 10/3



Flypel—for protection against flies,
gnats, midges, mosquitoes, etc.

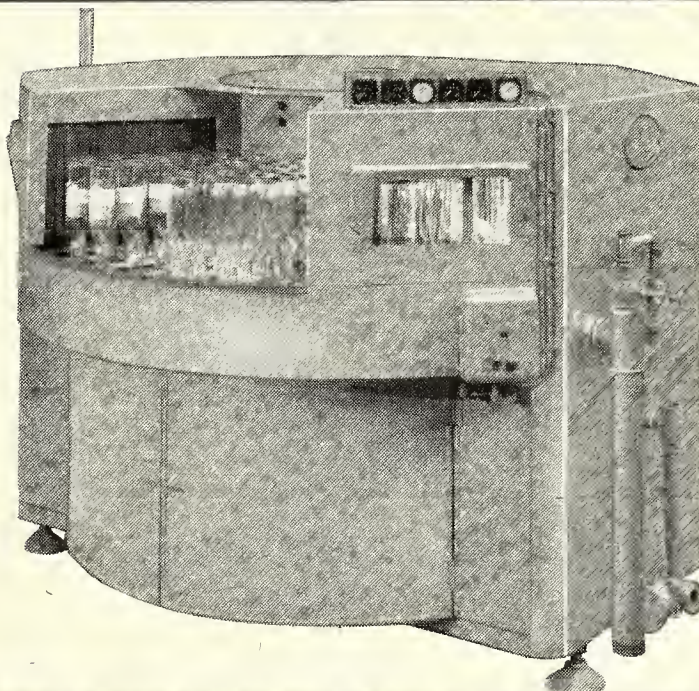


Imperial Chemical Industries Limited Pharmaceuticals Division Wilmslow Cheshire

Ph927/T

YOU CAN HAVE IT BOTH WAYS

Yes with the Powley 'Apex Major' you enjoy the benefits of both a small initial outlay and low running costs. This larger version of the well-known 'Apex' rotary hydro bottle washing machine incorporates a prolonged multi-stage and multi-temperature jetting treatment equivalent to many large straight-through machines and yet it occupies only a fraction of the floor space. The 'Apex Major' handles all shapes and sizes of bottles with or without labels and provides, in the one machine, two outputs 1,440 and 2,400 bottles per hour. Write for further details to the address below.



With the **POWLEY APEX MAJOR**
ROTARY HYDRO BOTTLEWASHER
TWO OUTPUTS IN ONE MACHINE 1,440 and 2,400 bottles per hour

THE OTHER MACHINES IN THE POWLEY RANGE OF HYDRO BOTTLE WASHERS

- 'VERTEX' ROTARY HYDRO—** Up to 720 bottles per hour.
- 'APEX' ROTARY HYDRO—** Two outputs in one machine. 1,080 and 1,440 bottles per hour.
- 'SPARTAN' HYDRO—** Available in a range of sizes to handle from 2,160 to 3,600 bottles per hour.
- 'NEW CYCLOPS' HYDRO—** Available in a range of sizes to handle from 3,600 to 14,400 bottles per hour.

R. POWLEY & SONS LIMITED, St. Marks Road, Sunderland, Eng.
TELEGRAMS & CABLES: "POWLEY" SUNDERLAND. TEL: 4846/7.



The original American beverage, imported. Aromatic and light-hearted. Made from bran, wheat, molasses.

INSTANT

POSTUM

100%
coffee-free

for the over-nerved

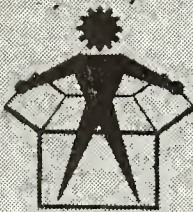
Retail Price
4 oz · 3/11d

National advertising supports your recommending it for a few weeks' trial—to your customers' blessing and your success.



G. COSTA & CO. LTD

STAFFORDSHIRE ST. LONDON S.E.15 · Tel: NEW Cross 3456
Also at:- 2 Canning St. Edinburgh · Tel: Fountainbridge 7461

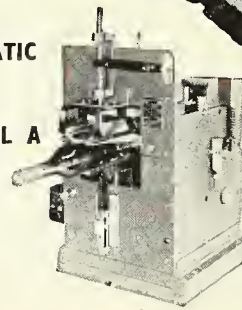


Newman

**LABELLING
AND
PACKAGING
EQUIPMENT**

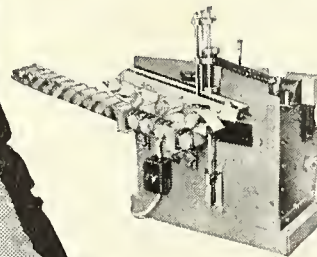
**SEMI-AUTOMATIC
LABELLING
MACHINE
BENCH MODEL A**

For all shapes of labels and bottles.



**AUTOMATIC LABELLING
MACHINE
BENCH MODEL B**

Gums and applies labels to cylindrical objects.



NEWMAN LABELLING MACHINES LTD., QUEENS ROAD · BARNET · HERTS Tel. BARNet 9866

Calmic

POLYBACTRIN

antibiotic powder spray

A combination of Neomycin sulphate, Zinc Bacitracin and Polymyxin 'B' sulphate in ultrafine powder form under pressure from an inert propellant. Polybactrin is for use as a treatment and prophylactic in all branches of surgery.

CALPOL TABLETS

A non-salicylate analgesic containing Paracetamol. Non-constipating. Has no adverse effect on the cardiac system. Suitable for children and peptic ulcer patients.

LAEVOSAN

for intravenous administration

Ampoules of sterile pyrogen-free Laevulose (fructose) in strengths of 20%, 40% and 62%. Also available in powder form as Laevulose Puris in 1 kilo and 5 kilo packs. Has many clinical advantages over dextrose in the treatment of metabolic stress and liver disease.

HYPON

Analgesic and antipyretic tablets

A balanced formula containing Codeine, Phenacetin, Acetylsalicylic acid plus Caffeine and Phenolphthalein to counter the side effects of depression and constipation.

CICATRIN

An amino-acid antibiotic, cream or powder, with the dual effect of controlling local infection and promoting healing. Indicated for the treatment of superficial wounds, burns, varicose ulcers, rectal surgery and pyogenic skin conditions.

CEREVON

(Ferrous Gluconate)

The original ferrous gluconate preparation, Cerevon is presented in tablet and elixir form.

DRAPOLENE

Formulated specifically for the prevention and treatment of napkin rash. The active principle of Drapolene is benzalkonium chloride, which is highly active against urea-splitting organisms which are held to be the causative factor of urinary dermatitis in infants and incontinent patients.

FERROMYN

(Ferrous Succinate)

Ferromyn is established as an extremely well tolerated organic iron salt for the treatment of iron deficiency anaemias, particularly during pregnancy. Also available, Ferromyn 'B' for iron deficiency accompanied by Vitamin 'B' deficiency. Ferromyn is presented in tablet, elixir and capsule form.

VASCUTONEX

A topical salicylate therapy for the relief of all soft tissue pains, especially those associated with muscular rheumatism. Vascutonex is non-staining, odourless and contains no counter-irritants.

LAEVOTONINE

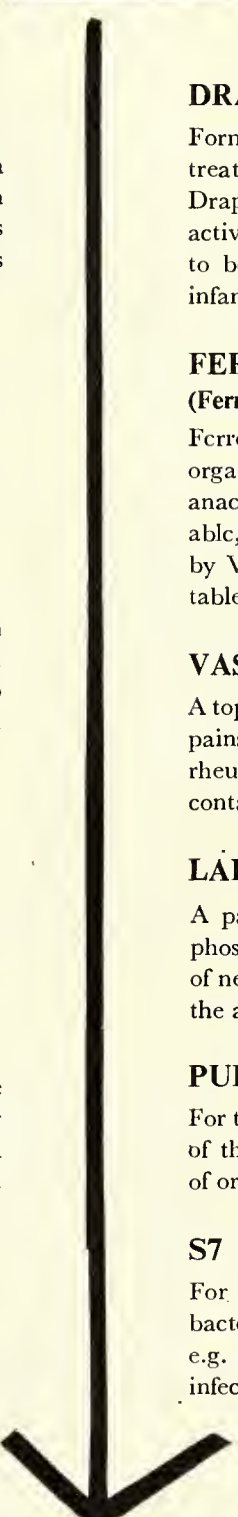
A palatable tonic containing Laevulose, strychnine, phosphoric acid and manganese, indicated in conditions of neurasthenia, convalescence and general debility in the aged.

PUROMYN

For the treatment of bacterial and fungicidal infections of the mouth particularly indicated in the treatment of oral moniliasis.

S7 JELLY, POWDER AND CREAM

For the treatment and prophylaxis of fungal and bacterial infections of the skin and mucous membranes, e.g. moniliasis, dermatophytosis, staphylococcal skin infections. Available as S7 Cream, Powder and Jelly.



pharmaceuticals



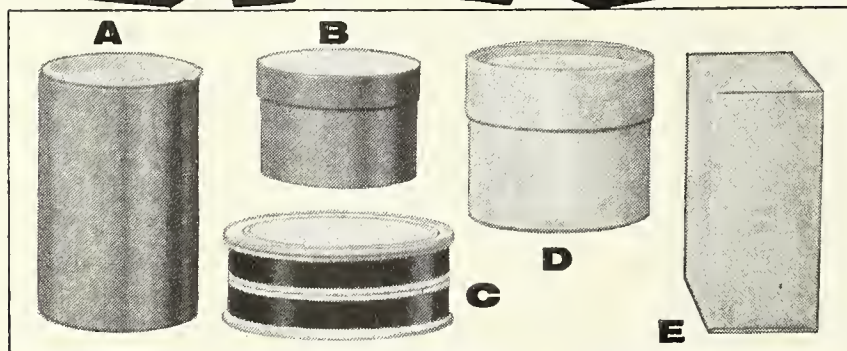
PLEASE READ THE DIRECTIONS ON THE BOX

Despite the well-advertised array of proprietary preparations designed to relieve this or that, the personal prescription still plays a large part in the chemist's day to day work.

Chemist becomes manufacturer in fact... weighs, measures, mixes and packs!

Fortunately he doesn't have to make his own boxes. Robinsons do that.

Years of close liaison have given us a practical appreciation of the chemist's special requirements, so that we are able to cater for most of their packaging needs — as the five types of boxes illustrated show. If you would like to take a closer look at them, ask your wholesaler to write for samples.



A 'Little John Drum' The perfect container for dispensing crystals, powders and tablets. Now available with plastic closure.

B Scarlet G.P.O. Pill box Easy to recognise in any medicine cupboard!

C Purple Flanged Pill box A superior quality box for private dispensing.

D A.P.D. (All purpose dispensing) Generous-sized box for holding powders, tablets, ointments and cream. Designed to reduce the number of stock boxes held to a minimum.

E Stock Pill and Tablet carton Rectangular box for low-priced dispensing, where the contents need not be particularly well protected.

* Our famous range of "Sealite" and "Chepette" Ointment boxes also continue to be available.

Robinsons of Chesterfield



ROBINSON AND SONS LIMITED WHEAT BRIDGE MILLS CHESTERFIELD

Telegrams: "Boxes" Chesterfield. Telephone: 2105, 11 lines

London Office: King's Bourne House, 229/231 High Holborn, London W.C.1. Telegrams: 'Omnibox' Holb. London. Telephone: Holborn 6383

the
NEW
antihistamine
with

NO

sedative
effect



FEBRAMINE

Febramine (cetoxime hydrochloride), a new antihistamine developed by Boots research laboratories, provides effective treatment of allergic disorders **without unwanted sedation.**

Extensive pharmacological and clinical investigations have also shown Febramine to be **free from atropine-like effects.**

Febramine is therefore the ideal antihistamine for patients who must remain active and alert.

Febramine will be introduced to the Medical Profession at the beginning of May. In view of the imminence of the hay-fever season, be prepared for a substantial prescription demand.

Febramine is supplied as yellow scored tablets, each containing 100 mg. of cetoxime hydrochloride. Basic N.H.S. prices: 30—2/4d. and 250—16/8d.

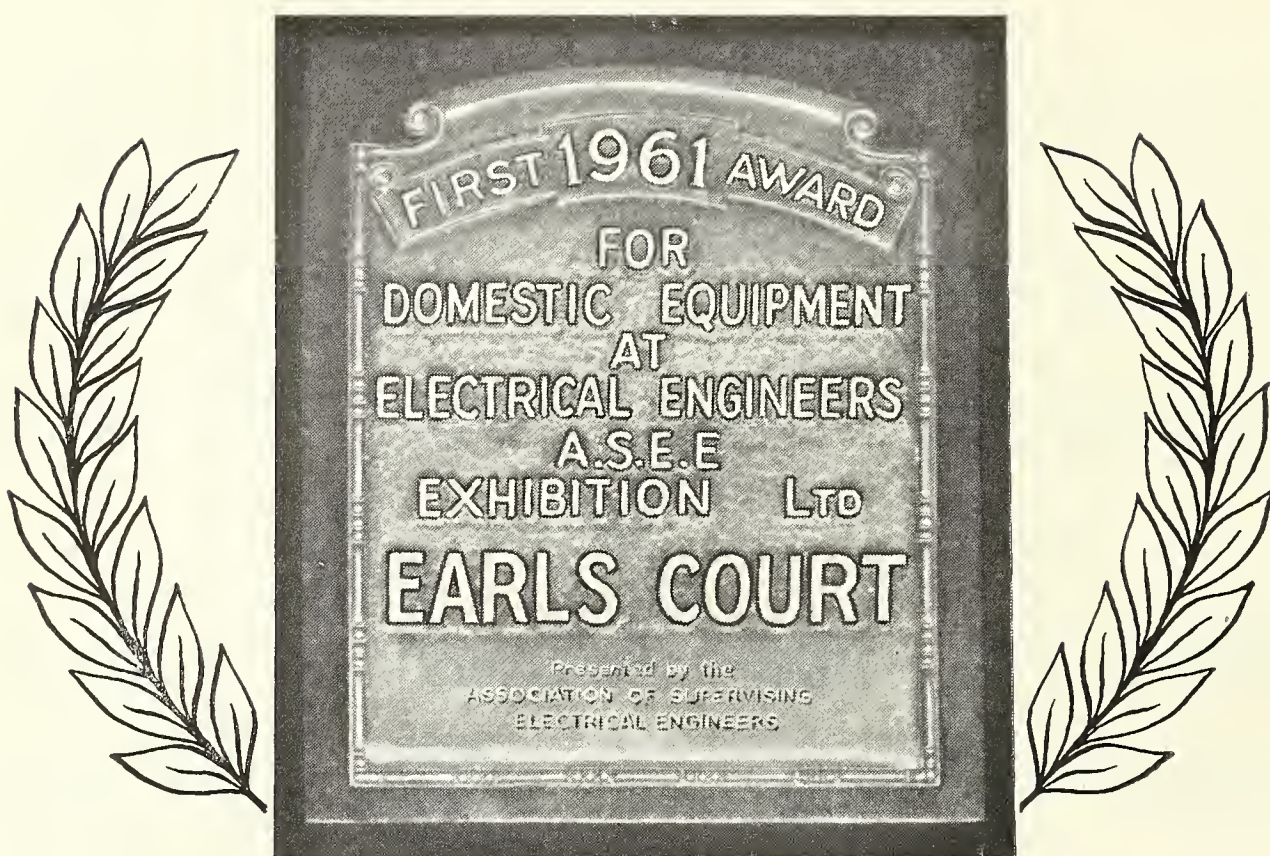


Available from your usual wholesaler or from

WHOLESALE DIVISION • BOOTS PURE DRUG CO. LTD • STATION ST • NOTTINGHAM

Tel: Nottingham 56111

or 71 FLEET STREET • LONDON E.C.4 Tel: FLEet Street 0111



Winner of A.S.E.E. Exhibition
 'Silver Plaque' Award, Earls Court 1961

Dreamland

LUXURY 3-HEAT ELECTRIC BLANKET

with *"Safety-seal"* construction

Above is the Silver Plaque presented at the 1961 Electrical Engineers (A.S.E.E.) Exhibition at Earls Court for the year's most outstanding domestic electrical appliance on display, won by Easipower with their new DREAMLAND 3-heat Luxury Electric Blanket with "SAFETY-SEAL" construction. This revolutionary new British development, patented throughout the world, embodies a unique electronic process which welds the entire blanket assembly into one inseparable unit. It is impossible for any two sections of the element to close together sufficiently to cause serious overheating. The new blanket is the first to be marketed in two colours — one side being Coral pink, the other Sky blue. This blanket sets a new standard in safety, comfort and attractiveness.

The award of the A.S.E.E. Silver Plaque is a fine tribute to the technical superiority of this latest addition to the DREAMLAND range of Electric Blankets. It was selected by a panel of Electrical Engineers and members of the Electrical Association for Women from many thousands of products of over 470 Exhibitors at the Earls Court Exhibition.

EASIPOWER APPLIANCES LTD., 30 High Street, Southampton.



INTRODUCING A BOTTLE FOR THE BATHROOM!

A new Scan line . . .
an attractively designed blue poly-
thene bottle supplied with dust-
proof acetate sleeve and cap.

Retail price **3/6d.**

Trade price 24/- per dozen.

Scan advertising in popular women's magazines including Everywoman, She, Woman & Beauty, Flair and Modern Woman, starts in MAY. And there's a strong P.R. Campaign, too.

Send your order now for the profitable new bottle and for the popular Traveller Tube still retailing at 2/-.

Trade price **13/6d.** per dozen.

Order today from :

ALLCOCK PRODUCTS LTD
Derby Street · ORMSKIRK · LANCs



THE CHEMIST AND DRUGGIST

ESTABLISHED 1859

The weekly newspaper for pharmacy and all sections of the drug, pharmaceutical and fine chemical, cosmetic, and allied industries

Official organ of the Pharmaceutical Society of Ireland and the Pharmaceutical Society of Northern Ireland

Volume 175

April 22, 1961

No. 4236

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PUBLISHED BY

MORGAN BROTHERS (PUBLISHERS), LTD.,
at 28 Essex Street, Strand, London, W.C.2

Telephone: Central 6565

Telegrams: Chemicus, Estrand, London

MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS

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ANNUAL SUBSCRIPTION

which includes The Chemist and Druggist Diary and Year Book, £2 10s. Single copies one shilling each.



Modern girls are going for NIKINI

NIKINI advertising reaches *millions* of modern girls—and they're deciding it's just the thing for *them*.

The NIKINI—a brief, streamlined garment of fine nylon film—holds disposable NIKINI PADS in place without pins, loops or bulges. NIKINI PADS cost far less than any other.



NIKINI GARMENT **6/11** NIKINI PADS **1/3** DOZ

Attractive packs and display material help your NIKINI sales.

Details from ROBINSON & SONS LIMITED (NIKINI SALES DEPARTMENT), WHEAT BRIDGE MILLS, CHESTERFIELD.

THIS WEEK'S CHANGES

NEW and altered entries notified for the first time.

A=Advanced, R=Reduced.

Entries new this week are marked thus: — ●

Ashes of Roses (150 Bourjois)				
A	perfume miniature	41	20 0	10 0 3 6
Ashes of Violets (150 Bourjois)				
A	perfume miniature	5011	20 0	10 0 3 6
Bikini (78 AS&Co)				
●	sunmeritan spray		40 0	20 0 6 9
Biligrain (1107 SAGB)				
Delete	ampoule 20 mils 30%	1		
Delete	50%	1		
Blakeys (136 BF)				
A	malted oatmeal	8 oz	12 9	1 4
	16 oz	25 6		2 8
Bourjois (150 Bourjois)				
●	soap eggs (6)	9158	6 0	1 6 10
●	soap egg mammoth	9163	25 4	6 4 3 6
A	lemon	9257	90 0	22 6 1 0
oblong toilet ..9256				
			gross	gross
			36 0	9 0 4 3
posy bowl .. C135				
Delete	casket	C157		
Christmas in July (150 Bourjois)				
A	bath cubes (6)	9404	27 2	13 7 4 9
A	perfume presentation	9401	120 0	60 0 21 0
Elastoplast (1155 S&N)				
●	quick pack		17 3	2 0
Electrique (813 MF)				
A	Cologne	2 oz	47 4	23 8 7 9
		4 oz	76 0	38 0 12 6
	perfume	phial	45 4	22 8 7 6
		1 oz	318 8	159 0 52 6
Endografin (1107 SAGB)				
Delete	ampoule 10 mils	1		
Delete	70% viscous	1		
Evening in Paris (150 Bourjois)				
●	hair cream	9044	21 6	10 9 3 9
●	hair spray	9220	54 4	27 2 9 6
●	hand cream	9198	25 8	12 10 4 6
●	liquid brilliantine	9102	21 6	10 9 3 9
●	perfume	2902	21 6	10 9 3 9
●	soap toilet (3)	9218	31 0	7 9 4 6
Delete	soap toilet	9033		
●	spray mist	3222	77 0	38 6 13 6
●	talcum	6378	21 6	10 9 3 9
A	vanishing cream	6270	15 9	7 10 2 9
Febramine (147 Boots)				
●	tablets	30	28 0	3 6
		250	16 8ea	25 0
French & Scott (481 F&S)				
	olive oil shampoo sachet		8 6	2 1 1 6
	treatment pack		51 0	12 9 7 6
Delete	Gammexane (649 ICI) insect powder			
Gina (97 Bayer)				
●	tablets	100	102 0	25 6 14 10 1/2
Hypnotique (813 MF)				
A	Cologne	2 oz	66 8	33 4 11 0
		4 oz	103 4	51 8 17 0
	perfume	phial	57 4	28 8 9 6
		1/2 oz	218 8	109 4 36 0
Ibcol (671 Jeyes)				
●	disinfectant extra	1 gall	12 0ea	15 6
		5 gall	52 6ea	70 0
I.C.I. (649 ICI)				
●	insect powder 100 gm		13 6	1 8

Inco-pads (1073 Robinson) 10 60 0 6 11				
R	Inversine (837 MSD)			
	tablets 2.5 mgm	100	10 6ea	15 9
		1000	96 0ea	144 0
	10 mgm	100	32 0ea	48 0
		1000	300 0ea	450 0
Jaunty (78 AS&Co)				
	foof spray		26 0	13 0 5 11
Kleinerts (706 Kleinerts)				
	baby pants			
●	Trainer	2194	64 0	7 11
Kodak (711 Kodak)				
R	Brownie movie camera		156 6ea	39 2ea 300 0
	model 11 f/1.9		310 5ea	77 7ea 555 1
R	movie turret camera f/1.9			
Lazitan (78 AS&Co)				
●	cream	2 oz	26 0	13 0 5 11
London Club (296 Coltmo)				
	hair tonic cream		39 0	19 6 6 6
Man-Tan (1076 Rolls)				
●	small		45 0	22 0 7 6
R	large		90 0	44 0 15 0
Miss Man-Tan (1076 Rolls)				
	tanning cream		93 4	46 0 15 6
Mitronal (1121 Searle)				
	tablets	50	90 0	22 6 13 1 1/2
		250	33 4ea	8 4ea 58 4
Corr.	Peacock (1379 DT)			
	glucose health drink	26 oz	21 6	2 3
Pifco (983 Pifco)				
●	Holiday battery shaver			52 6
Positan (1076 Rolls)				
●	small		45 0	22 0 7 6
R	large		90 0	44 0 15 0
Primitif (813 MF)				
A	Cologne	2 oz	56 0	28 0 9 3
		4 oz	90 0	45 0 14 9
	perfume	phial	51 4	25 8 8 6
		1 oz	394 4	174 8 57 6
Delete	Primolut depot (1107 SAGB)			
	ampoule 65 mgm 1, 3, & 20			
Roman Holiday (150 Bourjois)				
A	bath cubes (6)	9304	27 2	13 7 4 9
Springtime in Paris (150 Bourjois)				
A	bath cubes (6)	9204	24 4	12 2 4 3
A	soap toilet (3)	9206	31 0	7 9 4 6
A	talc	9205	28 2	14 1 4 11
Suba-Seal (479 WF)				
●	complete baby set	1C50	196 0	24 6
Super Man-Tan (1076 Rolls)				
	cream tanning lotion	small	60 0	30 0 10 0
		large	105 4	52 0 17 6
Corr.	Therex (1277 VI)			
	tablets	14	26 6	6 7 1/2 3 6 †
		36	47 3	11 10 6 3 †
Tryptizol (837 MSD)				
	tablets 25 mgm	30	15 0ea	3 9ea 26 3 s4B
		100	34 0ea	8 6ea 59 6 s4B
		500	165 0ea	41 3ea 288 9 s4B
Urograin (1107 SAGB)				
Delete	ampoules 30% 10 mils	1		
Delete	45% 20 mils	1		
Delete	60% 20 mils	1		
Delete	76% 20 mils	1		
Corr.	Vitasun (206 BB)		44 0	5 6

AMENDMENTS TO KEY TO SUPPLIERS:

(296 Coltmo)=COLTMO, LTD., 219 Grand Buildings, Trafalgar Square, London, W.C.2. WH1. 3705.
 (300 Cosette)=COSETTE (LINGERIE), LTD., 45 Beauchamp Place, London, S.W.3.

The CHEMIST AND DRUGGIST

INFORMATION DEPARTMENT is at your service

THE Information Department at 28 Essex Street, London, W.C.2, undertakes to give to subscribers the sources of supply of products within the pharmaceutical industry and to provide information on technical problems.

Inquiries sent to the department by post should be accompanied by a stamped addressed envelope. Inquiries may also be put by telephone : CENTRAL 6565.

Technical Books for the Pharmacist's Library . . .

PHARMACEUTICAL FORMULAS, Vol. 1

The current edition (the 12th, published 1953) was completely revised to incorporate the latest formulations required by recent advances in medical science. It presents a comprehensive collection of pharmaceutical material from world-wide sources. A supplement (April, 1955) brings the book up to date with the changes effected in the British Pharmacopœia, 1953; British Pharmaceutical Codex, 1954; Pharmacopœia of Japan, and State Pharmacopœia of the U.S.S.R.
Price £2 0s. 0d. Postage 1s. 9d.

PHARMACEUTICAL FORMULAS, Vol. 2

11th Edition

Contains nearly 900 pages of formulas of adhesives, beverages, cosmetics, dental preparations, horticultural products, lacquers, perfumery, pesticides, toilet preparations, etc., etc. The work has undergone a thorough revision by a team of specialists and is unrivalled of its kind.
Price £2 2s. 0d. Postage 1s. 9d.
If Pharmaceutical Formulas Volumes 1 and 2 are ordered together the combined cost is reduced to £3 17s. 6d. Postage 2s. 6d.

CHEMIST'S DICTIONARY OF MEDICAL TERMS

7th Edition

Prepared primarily for pharmacists, the Dictionary is indispensable also for pharmaceutical manufacturers, advertisement writers concerned with the marketing of medicinal products and indeed all who have to delve into the multifarious medicinal compounds of modern times.
Price 17s. 6d. Postage 9d.

PHARMACEUTICAL EMULSIONS AND EMULSIFYING AGENTS

3rd Edition, 1959

With new emulsifying agents continually coming on to the market (others being withdrawn), the index of proprietary emulsifiers included in this essentially practical handbook would alone make the possession of each new edition a "must" for practising pharmacists, technologists and students. Revised by Mr. R. F. White,

the edition is fully up-to-date and informative. 140 pages.
Price 9s. Postage 8d.

ESSENTIALS OF TREATMENT

1st Edition, 1956

A companion volume to "Diseases and Remedies." An informed and sage approach to the newer drugs in relation to traditional remedies and a placing in proper perspective of medicine, surgery and good nursing in the restoration of patients to health.
Price 17s. 6d. Postage 9d.

THE ART OF DISPENSING

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£2 TRADE IN & 5/- CASH BONUS

To offer the 250,000 men who will replace their old electric shavers this year.

For the assistant in your shop every time he sells a Sunbeam model—Trade-in terms or not.

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Forceful National advertising will feature a reproduction of the special display card illustrated below and will direct purchasers to the shops which feature it. Display this showcard prominently in your window and get your maximum share of this increased business.

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If you have not yet received the mailing brochure giving full details of these 2 great promotions and the special Trade-In showcard, write now to:—

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Sunbeam means a deal



(she takes **VITASUN** capsules
for suntan without sunburn)

She, and more and more people everywhere take Vitasun! Big popularity gains in the U.K.; and in Holland—Belgium—Luxembourg—Switzerland—South Africa—East Africa—Australia—New Zealand.

Growing demand at the Olympics, too. Used by the British 1960 Team at Rome and Naples—South African 1960 Olympic Team at Rome—as well as for athletic meetings in South Africa and elsewhere. Supplies already requested for the 1962 British Games at Perth.

Big sales also on ships on sunshine routes, Orient, P. & O. and Royal Mail Lines—and through NAAFI for Middle East troops and their families.

LIVELY ADVERTISING SUPPORT

- Provincial Press
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PLUS

Strong Editorial Backing

**MAXIMUM PROFITS IF YOU
STOCK UP IN GOOD TIME**

**VITASUN
CAPSULES**

(Patents applied for in U.K., France, Canada and U.S.A.)

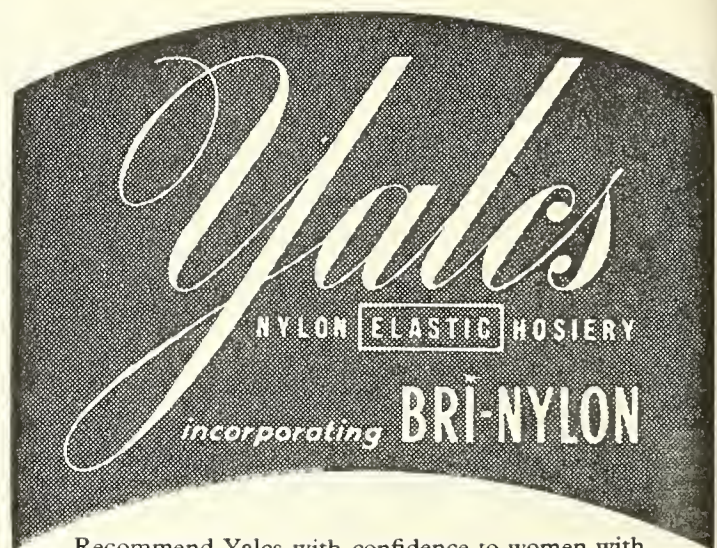
Retail Price: 5/6 for box of 1 doz. Capsules

Manufactured and Supplied by:

BURGOYNE BURBIDGES & CO. LTD.

274 Ilderton Road, London, S.E.15.

Tel. New Cross 7144



Recommend Yalcs with confidence to women with actual or incipient varicosities. Yalcs give all the therapeutic support of true two-way stretch—without putting a strain on vanity!

Yalcs are available ex stock — at full trade discount — in two types:

Superfine Retailing at 63/- pair

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Yalcs Service may be supplied against N.H.S. prescription in Nylon Elastic Yarn (Lightweight) Two-Way stretch.

Yalcs Elastic Socks for men also available.

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<p>BOTANICALS CHEMICALS GUMS</p>	★	<p>ESSENTIAL OILS SPICES WAXES</p>
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**ATROPINE
SULPHATE**

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**STRYCHNINE
ALKALOID**

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JOHN KELLYS (LONDON) LTD.

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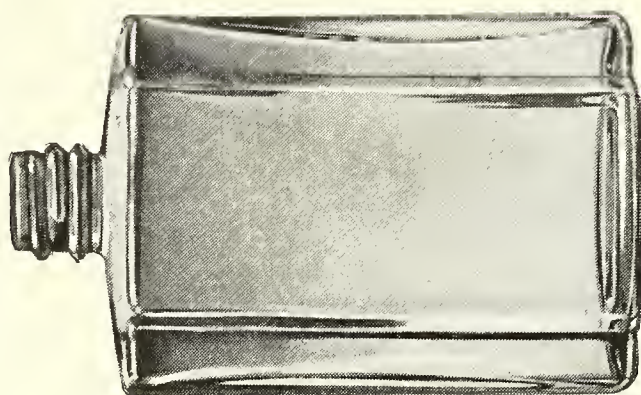
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Telegrams: "Ergotine, Stock, London"

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High Quality Glassware

THE INTERNATIONAL BOTTLE CO., LTD.

140 PARK LANE LONDON W.1

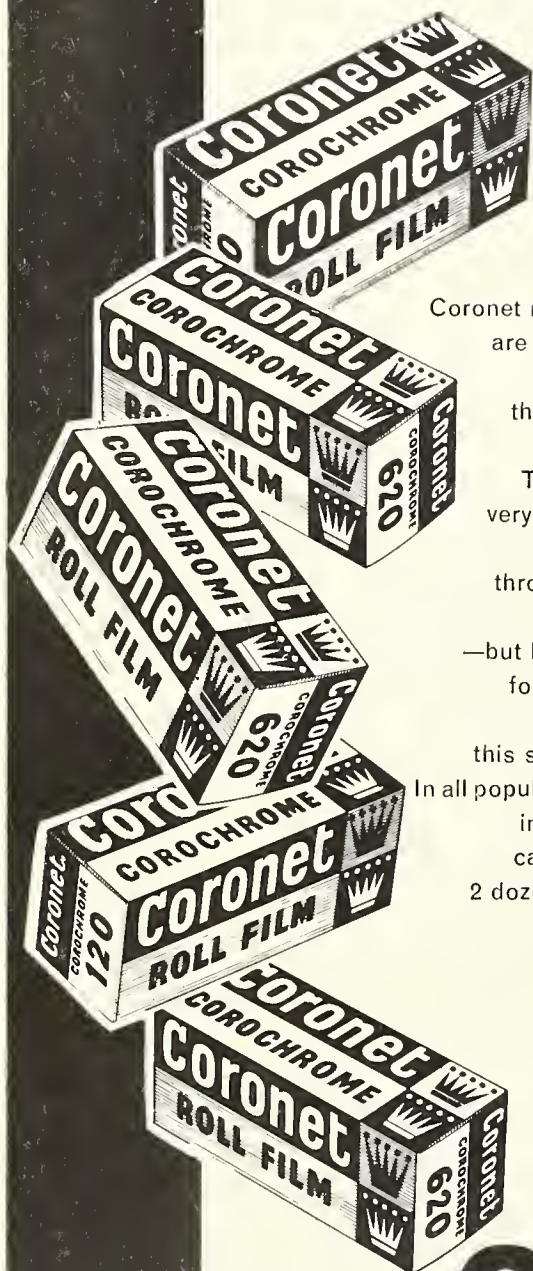
Telephone MAYfair 6992 (5 lines) Telegrams AUTREFOIS, AUDLEY, LONDON



Designers and Manufacturers of



**READY
SALES
THIS
SUMMER**



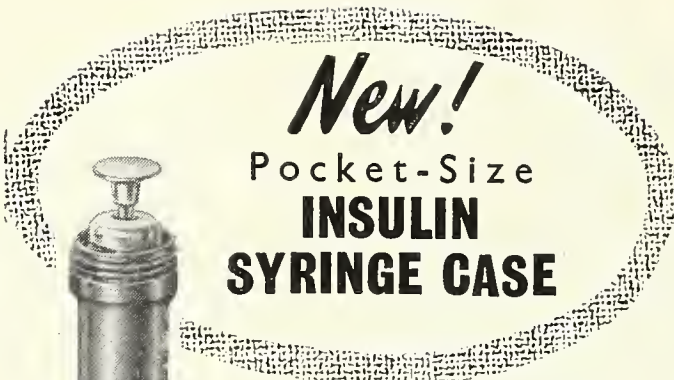
Coronet roll films are the best value at the lowest price. They're a very popular buy all through the year —but be ready for the big demand this summer! In all popular sizes, in display cartons of 2 dozen films.

* Camera Catalogue available on request.

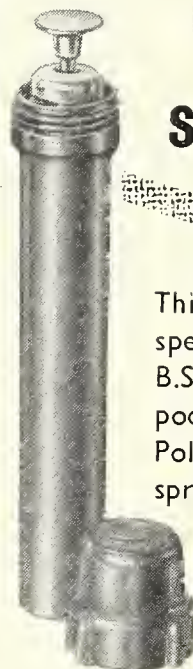
2/8
ONLY

coronet

CORONET LIMITED
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New!
**Pocket-Size
INSULIN
SYRINGE CASE**



This new, plastic syringe case, specially designed for the new B.S.I. 1619 Insulin Syringe, is pocket-size and spirit-proof. Polythene washer and retaining spring hold syringe firmly in the spirit. For syringes up to 2cc size.



SURGICAL EQUIPMENT SUPPLIES LTD
WESTFIELDS ROAD, LONDON, W.3

ILODERM

a unique self-sterile Ointment that compares with no other in the treatment of:—

- BURNS •**
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- DERMATITIS •**
- CRACKED NIPPLES •**

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ILON LABORATORIES
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THE VEGETABLE TREATMENT FOR RHEUMATISM

VEGETEX is a concentrated powder prepared by dehydrating selected vegetables in closed circuit at low temperature. Being alkaline, VEGETEX counteracts the over-acidity associated with rheumatic conditions.

YOU CAN RECOMMEND VEGETEX WITH CONFIDENCE

We shall be glad to send you literature on request.

Retail Prices:

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160 tablets 12/1 • 500 tablets 30/9

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Other Modern Health Products include: BIOBALM • VECON • NATEX • GARLODEX

'LITTLE WILLIE' ON THE MARCH AGAIN!

FROM
CHEMISTS
ONLY

for "CARNATION"
the most popular corn remover

On 10ft. high posters in the big cities and towns and advertisements in the National Press this summer, our famous tramp will be featuring CARNATION CORN CAPS and advertising them as "FROM CHEMISTS ONLY."

All you have to do is to ensure you have him on display all the time and there will be regular easy sales!

CARNATION CORN CAPS — A "BEST SELLER"

Retail 1/3 Packet (including P.T.)
Trade 8/3 Doz. + 2/1 Tax. Generous bonus on quantities.

Also Recommend: CARNATION CALLOUS CAPS — 8/3 + 2/1 TAX



A PRODUCT OF **Cuxson, Gerrard & Co. Ltd.** OLDBURY, BIRMINGHAM

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ALL QUALITIES

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BRITISH DYEWOOD
Company Limited**

19 ST. VINCENT PLACE
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*Today's best value in
heavy gauge* **STEEL
SHELVING**



£3.15.0

DELIVERED FREE!

- Brand new — Manufactured in our works.
- Shelves adjustable every inch.
- Heavy gauge shelves will carry 400 lb. each.
- Stove enamelled dark green.
- 6 shelves per bay—Extra shelves 8/- each.
- Quantity discounts.

72" High
34" Wide

12" Deep

**THE ONLY HEAVY GAUGE
SHELVING AT THIS PRICE**

Other Sizes available. Also available in white at £5 per bay.

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**PRESCRIPTION
BOTTLES**

require top grade cork stoppers which permit no leakage.

Chemists, who know from experience, continually specify Robinson Corks—the first class quality never varies.

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**DISINFECTANTS
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CARBOLIC DISINFECTANTS

Black & White types—all strengths

MARKET & FARM DISINFECTANTS

Approved for use under Diseases of Animals Orders

PINE & AROMATIC DISINFECTANTS

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QUATERNARY AMMONIUM COMPOUNDS

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Packed in 1, 5, 10 and 40 gallon drums

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BY a lively sustained National Advertising Campaign in women's magazines



BY a first class well-known and well presented product that brings regular repeat sales

AEROSOL 3/9 ZOFLORA 2/6

Free display material available on request



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INECTO Hair Magic

SEMI-PERMANENT HAIR COLORS

No skin test

- * Sparkling new pack gives Hair Magic powerful woman appeal
- * Special shades for hair up to 50% grey
- * Wonderful range—over thirty colors, including latest fashion shades



- * Backed up by more national advertising than ever before in:
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 · GOOD HOUSEKEEPING · VANITY FAIR · EVERYWOMAN · SHE
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 WOMAN & BEAUTY · HAIR FASHION**

You pay: 1/8 + P.T.
per bottle
You get: 3/10 per bottle

Your profit: 1/4
on every bottle of
quick-selling Hair Magic

Hair Magic is made by Inecto, the largest and most experienced manufacturers of hair colouring in the world

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NEW AYRTON Lines

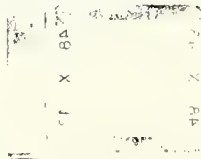


JAUNTY FOOT SPRAY

The very latest thing in aerosol-conveyed luxury-fragrant, refreshing Jaunty Foot Spray cools hot feet like magic!

Your lady customers, especially, will welcome this new Ayrton line. Just a dash brings gentle, ecstatic relief to hot and tired feet.

36/- per dozen. Tax 25%. Retail 5/-.



BIKINI AEROSOL SPRAY

The latest exciting product in the Bikini Series. No application difficulties here! Simply remove the cap, lightly depress the plunger and there you have it! A smooth, controlled application of a first-class suntan spray. What could be easier? And what more certain of success on the 1961 holiday beaches? 40/- per dozen, Tax 50%. Retail 6/9.



LAZITAN CREAM

Introduced last season as a liquid, we now present Lazitan as a cream application for a smooth, even, glorious tan whatever the weather.

Packed in large 2-oz. tubes, the new Lazitan is easier to carry, easier to handle and easier to apply. The tubes are individually cartoned, as illustrated, and an attractive display outer to hold one dozen will be available to meet your orders.

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AYRTON, SAUNDERS, & CO. LTD., HANOVER ST., LIVERPOOL

Phone: Royal 8282

VITAMIN D3

PURE CRYSTALLINE D3

o-Cresol- α -glycerol-ether
(Mephesisin)
Guaiacol- α -glycerol-ether

Manufacturers:

PEBOC LIMITED

Sales Office: 629/630 TOWER BUILDING
LIVERPOOL 3 : ENGLAND

Laboratories: NORTHOLT, MIDDLESEX

ILOX EYE LOTION

Recommend it with assurance—for Eye Strain, Tired Eyes, Inflammation, etc.

Retails at
3/- per bottle
(including eye bath)

Cost Price 21/- per doz.
plus 5/2 P.T.

LARGE SIZE 10 ozs: **4/- per bottle**
Cost Price 28/- per doz.
plus 7/- P.T.

ILOX EYE BATHS
Cost per doz. 10/- plus 1/6 P.T.
Retail 1/4½ each.



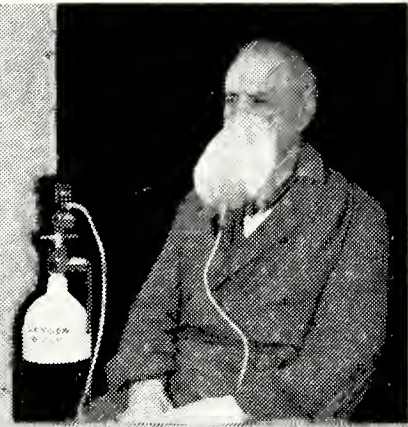
BONUS OFFER
1 DOZEN PARCEL
13 to the dozen
ATTRACTIVE SHOW-CARD
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Prepared by

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Oxygen is Life



*Respiratory diseases
are now a universal problem*

Specially designed to meet this problem is the Kidde Type H.S. Oxygen set which is available for purchase and has been developed for the National Health Service. It is suitable for use with standard medical oxygen cylinders fitted with bull nosed valves.

*Approved by the Ministry of Health
for domiciliary use against E.C.10
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The equipment is simple to operate, can be easily connected to cylinders by hand without the aid of spanners, is robust and reliable in service. Supplied complete in box for transit purposes.

Stock the H.S. set now for prescription use.



THE WALTER KIDDE COMPANY LIMITED

BELVUE ROAD • NORTHOLT • MIDDLESEX • Telephone VIKing 6611

everything

**THE BEST HAIR CREAM
CAN GIVE YOU**

**plus
FREEDOM FROM
DANDRUFF!**



that's the story we'll be
telling to millions when the
new LOXENE advertising
campaign breaks this summer!

Make sure you get everything by

LOXENE

F. W. Hampshire & Co. Ltd. Sunnysdale, Derby.

AND WHAT A CAMPAIGN!

It's got
everything

- 1** *Heavier, more intensive T.V. Advertising – frequent 30 second spots on all stations!*
- 2** *Powerful Press advertising – big, dominant spaces in the DAILY MIRROR and DAILY EXPRESS!*
- 3** *The strong sales story only LOXENE HAIR CREAM can tell!*

Starts MAY 1ST

Men everywhere are conscious of dandruff. And with Loxene's bigger than ever campaign, they'll be conscious that Loxene Medicated Hair Cream gives them perfect grooming *plus* freedom from dandruff. This means more business . . . more profits for YOU!

stocking and displaying plenty of

Medicated Hair Cream

Urgent Orders: Tel DERBY 22202/4 (3 lines)

HORMO-PHARMA LTD

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MARTINDALE'Shave been appointed sole distributors
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and Channel Islands

FOR

OKASA

THE 20th CENTURY TONIC

Solid, Steady ProgressA steadily widening demand continues to
multiply sales of the new-formula OKASA.**Powerful Advertising Programme**The successful advertising programme for
OKASA is being consistently maintained on
Television in Jim's Inn and in such influential
newspapers and magazines as the Daily
Express, Sunday Express, Punch, T.V. Times,
etc.**STANDARD SIZE (100 TABLETS) 24/6**
TRADE PRICE 16/4**TRIAL SIZE (50 TABLETS) 14/9**
TRADE PRICE 9/10

(Not subject to Purchase Tax)



Please address all orders and enquiries to

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Telephone: MAYfair 7811

Burson Stockings, made exclusively
on special knitting looms, are the product
of many years' intensive research into the
making of surgical stockings.Always dispense **and recommend**
Burson 2-Way Stretch Hosiery and ensure
your customers' complete satisfaction.
The quality—finish—colour and durability
of Burson Hose make them the first choice
of those who appreciate the best. Burson
Stockings are fully fashioned and virtually
indiscernible in use.Burson Stockings are advertised in the
Medical Journals and in a strong list of
National Weekly Newspapers and Women's
Magazines.**AVAILABLE FREE ON REQUEST WITH BURSON STOCKINGS:—**

- *Instruction Chart with details for measuring, fitting and exact adjustment to fit and tension.*
- *Individual Measurement and Order Forms.*
- *Instructions for mending and washing.*
- *Illustrated leaflets for your customers.*

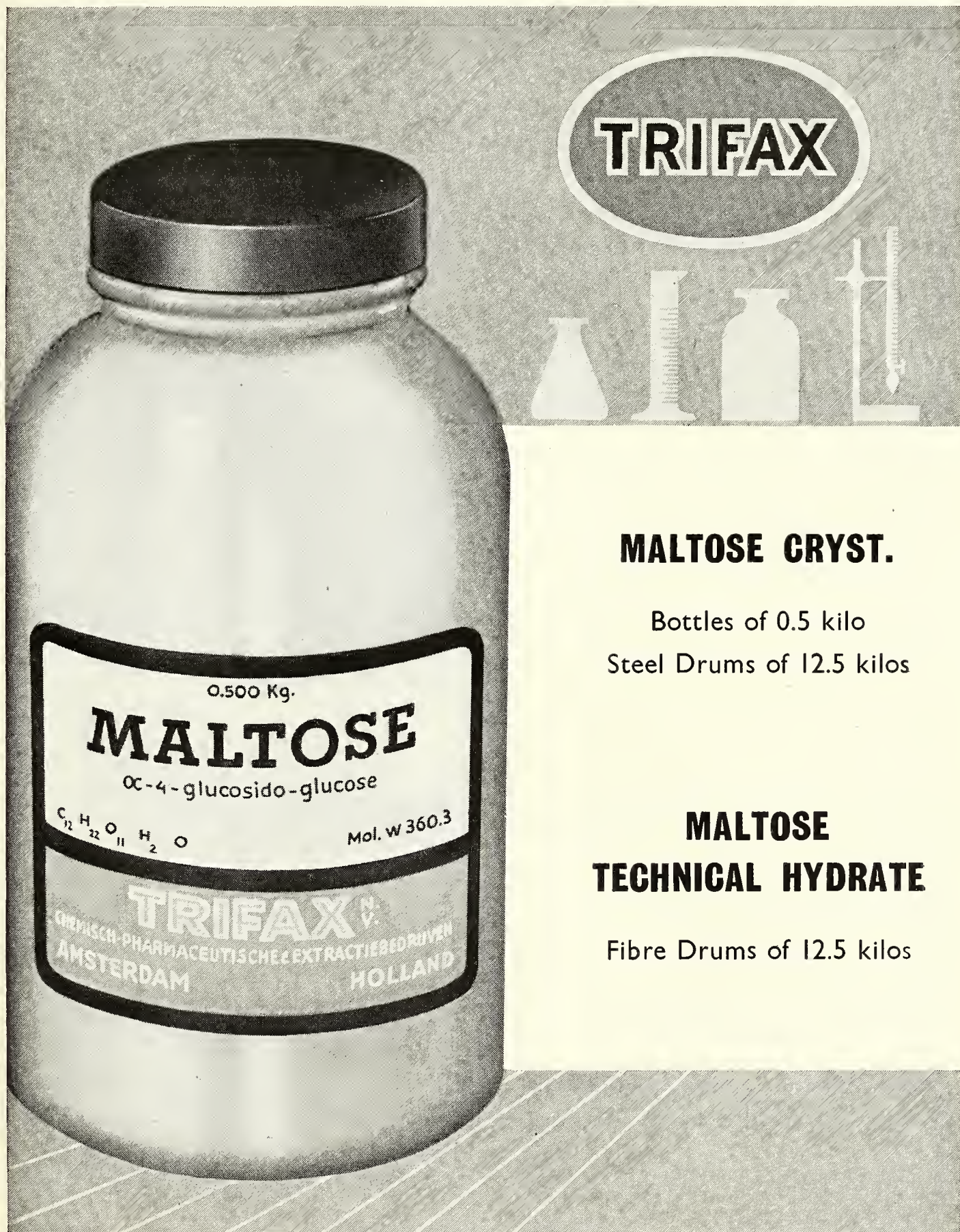
BURSON**TWO-WAY STRETCH HOSIERY
IS MADE FROM LASTEX YARN***Your clients may well prefer these
wonderful Burson Nylon Stockings,
made on the identical, exclusive
machines which have made Burson
leaders in their field, and which can
now be dispensed under the N.H.S.*

Sole Distributors:—FASSETT & JOHNSON LTD

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Also at 6 CROW STREET, DUBLIN

*Burson is the registered trademark of the Kendall Company
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MALTOSE CRYST.

Bottles of 0.5 kilo
Steel Drums of 12.5 kilos

MALTOSE TECHNICAL HYDRATE

Fibre Drums of 12.5 kilos

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A "C & D" BOOK**The Pharmacy of SILICONES***— and their uses in medicine*

BY RONALD LEVIN, F.P.S.

THE silicones are a chemical revolution. Pharmaceutically they have proved their value in routine techniques from sterilisation to bottle washing, from ampoule filling to formulation. "The Pharmacy of Silicones" gives access to the chemical and physical properties of these compounds; to their toxicology; their varied applications, particularly in medicine; and a bibliography.

WITH EIGHT-PAGE INSET OF PHOTOGRAPHIC ILLUSTRATIONS

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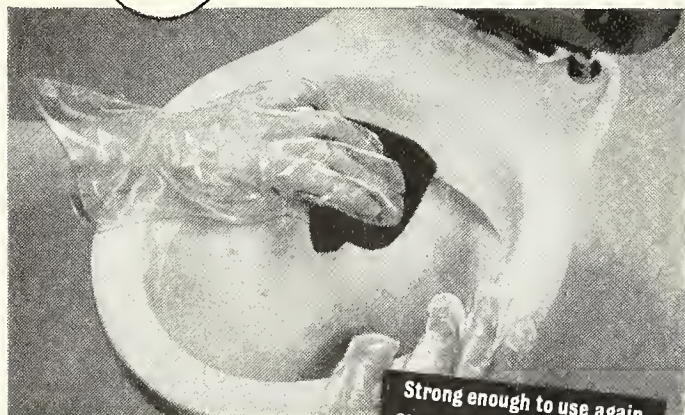
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POLYTHENE PROTECTIVE GLOVES

**Strong enough to use again**
Cheap enough to throw away

New H. & A. Poligloves have hundreds of uses in and around the home. CAR MAINTENANCE, GARDENING, FOOD PREPARATION, HOUSEHOLD WORK, LAYING FIRES, HOME HYGIENE. Washable and reusable they are ideal wherever hygiene and cleanliness is important, and especially useful for handling food. H. & A. Poligloves, which fit either hand, come in three sizes, small, medium and large. They are packed in striking display boxes, each containing 1 doz. medium, ½ doz. large, ½ doz. small size individual packs holding 10 gloves for 2/11.

THERE'S EXTRA PROFITS AND BUSINESS FOR YOU!

So order today from your usual wholesaler or from the sole manufacturers

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Grams: Howay, Manchester

Whitaker's
for Dyes

"LUTON" STRAW HAT DYES and
"AURORAL" COLD WATER DYES
are nationally advertised and are regularly requested.
Attractive Pattern Cards and Showcards supplied.

Write for Price List giving full particulars to:
WHITAKER & CO. (KENDAL) LTD., KENDAL.

60 Years'
Repute as
the Family
Remedy
for
Indigestion



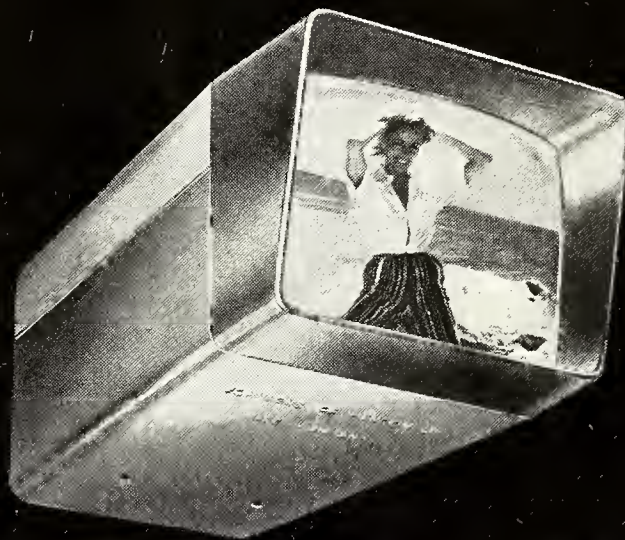
P.A.T.A.
Retail Prices
1/7, 3/6,
5/7, 13/5, 24/3
(including
tax).

BOX'S**INDIGESTION PILLS**
W. H. BOX, 47 COBOURG ST., PLYMOUTH

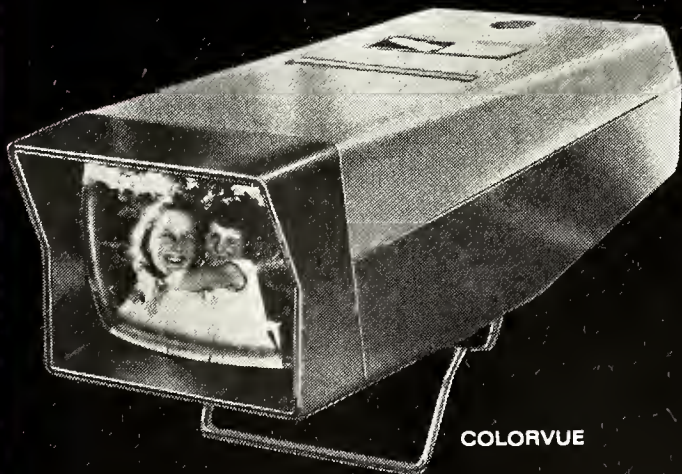
BIG, BRIGHT PROFITS from these Johnson viewers



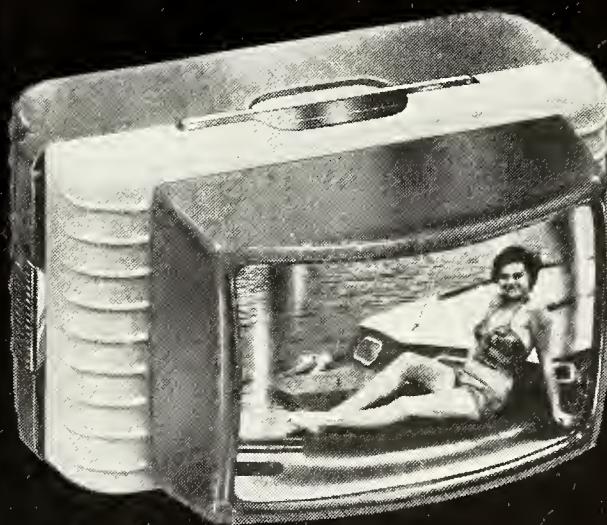
JUMBO 66



JUMBO 22



COLORVUE



JUMBO 35

HAVE YOU ORDERED YOUR SUMMER STOCKS YET? This is the season when thousands of photographers are taking millions of colour pictures. Anytime now they'll be looking for well-designed, reasonably-priced viewers that will show their transparencies big and bright. Johnson viewers. They are good-looking, sturdy and give years of trouble-free service. To display them is to sell them.

JUMBO 22 VIEWER 2 × 2 in. slides. 4 degrees of magnification. Battery operated, or mains transformer base.

JUMBO 66 VIEWER Attractive, battery-operated viewer for 2½ in. square transparencies in 2¾ × 2¾ in. frames.

JUMBO 35 VIEWER 'Big-picture' viewer for 35mm. transparencies. Picture magnified almost four times. Battery operated.

COLORVUE VIEWER Shows 2 × 2 in. slides brilliantly. With folding table support. Finger pressure operates light.



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As a result of extensive clinical tests, Dutton & Reinisch Limited announce a most important new class of FUNGICIDAL and BACTERIOSTATIC substances, based on Undecylenic-alkanolamides. Far milder on the skin than halogenated phenolic derivatives, and of far lower toxicity, these substances are highly effective against fungus infections such as athlete's foot as well as the yeastlike fungi associated with Dandruff. In having outstanding fungicidal properties allied to bacteriostatic characteristics these products offer a new weapon to the formulating chemist in his search for the most effective compositions.

THE NEW
FUNGICIDAL
and
BACTERIOSTATIC
AGENTS

LORAMINE U. AND DU. 185
Undecylenic Alkanolamides

SKIN - FRIENDLINESS

LOW TOXICITY

- * *Highly fungicidal and bacteriostatic*
- * *Far better tolerated by the skin than halogenated phenolic derivatives*
- * *Skin substantive*
- * *Compatible with soaps and detergents*
- * *Perfume compatible and a perfume fixative*
- * *Simple in formulations*
- * *Patents applied for*

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CENTRAL SCOTLAND. Chemists' business in County Town for sale by private bargain. Modern shop on one of the main thoroughfares. Turnover £12,000. N.H.S. forms over 7,000. Good reason for disposal. For further particulars apply Box C 3558.

APPOINTMENTS

**ASHFORD HOSPITAL,
ASHFORD, KENT**
Assistant-in-Dispensing

required at the above hospital.
Salary £395 a year by annual increments to a maximum of £535 a year.
Applications with names and addresses of two referees should be made to the Hospital Secretary. C 6460

**BARNET GENERAL HOSPITAL,
WELLHOUSE LANE,
BARNET, HERTS**
(490 beds)
Pharmacist

required in this modern and well-equipped pharmacy (Category V Hospital).
Barnet is terminal of Northern Line (London Transport). Whitley Council salary scale with London Weighting. Applications to Hospital Secretary (Phone: Barnet 7421), with names of two referees. C 6365

**BARNET GROUP HOSPITAL,
MANAGEMENT COMMITTEE,
WELLHOUSE LANE,
BARNET, HERTS**
Locum Tenens Pharmacist

required for duties within this Group of Hospitals from June 1 to September 30.
Applications, giving details of experience, etc., should be sent to the Hospital Secretary, Barnet General Hospital, at the above address. C 558

**CENTRAL GROUP HOSPITAL
MANAGEMENT COMMITTEE**
Senior Pharmacist

for Bethnal Green Hospital. Modern department approved for training students. Salary scale £770—£1,010 p.a. plus higher qualification allowance and London Weighting. Please apply with details of age, training and experience to the Group Secretary, 213 Kingsland Road, London, E.2. C 553

**ASHFORD HOSPITAL,
ASHFORD, KENT**
Pharmacist

required at the above hospital.
Salary £690 a year by annual increments to a maximum of £920 a year.
Applications with names and addresses of two referees should be made to the Hospital Secretary. C 6461

**CENTRAL GROUP HOSPITAL
MANAGEMENT COMMITTEE**
Locum Pharmacists

Holiday relief vacancies:—
12th—24th June, 1961
Salary 18 guineas p.w. Applications with full details to Chief Pharmacist, Metropolitan Hospital, London, E.8. C 561

**HEATHERWOOD HOSPITAL,
ASCOT, BERKS**
Pharmacist

required for modern well equipped department. Apply with full details and names of two referees to Secretary. C 6453

**LONDON CHEST HOSPITAL,
VICTORIA PARK, E.2**
Locum Pharmacist

required for a period of 8 weeks as from May 1. Salary in accordance with the Whitley Council scales. Apply to the House Governor, London Chest Hospital, Victoria Park, London, E.2. C 6447

**LONDON JEWISH HOSPITAL,
STEPNEY GREEN, E.1**
Locum Pharmacist

required at the above hospital from April 24th to May 27th and from July 3rd for eight weeks. Salary £18 18s. per week. Applications in writing to be sent to the Chief Pharmacist. C 6450

**LONDON CHEST HOSPITAL,
VICTORIA PARK, E.2**
Senior Pharmacist

required. Salary in accordance with the Whitley Council scales. Applications stating age, qualifications and experience, accompanied by three testimonials, in writing to the House Governor. C 6448

**ST. STEPHEN'S HOSPITAL,
FULHAM ROAD, S.W.10**
Locum Tenens Pharmacist

required at the above hospital. Eighteen guineas weekly. Apply immediately to Chief Pharmacist. C 6415

**NEWMARKET
GENERAL HOSPITAL**
(302 beds)

Assistant-in-Dispensing

required for Department recently moved to newly built accommodation.
Ideal working conditions. Alternate long week-ends.
Preference to applicants with hospital experience. Salary in accordance with Whitley Scales. Applications to Chief Pharmacist, Newmarket General Hospital. C 6464

**SEAMEN'S GROUP,
DREADNOUGHT SEAMEN'S
HOSPITAL,
GREENWICH, S.E.10**
Locum Pharmacist

required from 17th July—5th August; 14th—26th August; 25th September—30th September. Weekly salary 18 guineas plus hourly rate 12/6 for two overtime sessions of two hours each week. C 555

AND

**ALBERT DOCK ORTHOPAEDIC
HOSPITAL, E.16**
Locum Pharmacist

required from 28th August—16th September. Weekly salary £20 9s. 6d.
Apply, House Governor, Dreadnought Hospital, Greenwich, S.E.10. C 554

**SOUTHMEAD HOSPITAL,
BRISTOL**
(570 beds)

Post-graduate Apprentice Pharmacist

A vacancy will occur in August next for the above appointment. This post offers wide experience in modernised department.
Applications, stating age, qualifications and experience to be made to Group Secretary. C 3579

**STEPNEY GROUP HOSPITAL
MANAGEMENT COMMITTEE,
MILE END HOSPITAL,
BANCROFT ROAD, LONDON, E.1**
Deputy Chief Pharmacist

Applications are invited for the post of Deputy Chief Pharmacist (Category IV). Salary scale £815 p.a. by annual increments to maximum of £1,110 p.a. plus London Weighting. Whitley Council conditions of service. Further particulars may be obtained from the Chief Pharmacist (Tel.: Advance 4855). Applications stating age, qualifications, experience and the names of two referees, to be sent to the Group Secretary at the above address. C 6466

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329 HIGH HOLBORN, LONDON W.C.1.

Telephone : HOLBORN 7406/7

Professional Valuers to the Pharmaceutical Trade.—Wholesale, Retail and Hospital Stocks. Branches throughout England and Scotland.

Appointments—Continued**SOUTHEND-ON-SEA HOSPITAL
MANAGEMENT COMMITTEE****Post-graduate Student**

required in the Pharmacies of the Hospitals in the Southend-on-Sea Group. Salary £460 per annum. The Hospitals are situated in pleasant surroundings and the post offers excellent opportunities for experience in all branches of pharmaceutical work including dispensing for in-patients and for patients from a busy Consultative Out-patients Department, manufacturing, sterilising, dressings and instruments. Students who contemplate sitting the Final Exam this year will be considered for appointment in September. Applications, stating age, particulars of education, etc., with the names of two referees, should be sent to the Secretary, General Hospital, Southend-on-Sea, as soon as possible. C 6452

**SPRINGFIELD HOSPITAL,
LONDON, S.W.17****Senior Pharmacist**

required, permanent appointment. Salary £770 x £30 (1)—£800 x £35 (6)—£1,010 per annum plus London Weighting. Applications to: Group Secretary, Springfield Hospital, Beechcroft Road, London, S.W.17, giving age, qualifications, details of experience and names of two referees. C 556

**ST. NICHOLAS HOSPITAL
MANAGEMENT COMMITTEE,
ST. NICHOLAS HOSPITAL,
GOSFORTH,
NEWCASTLE UPON TYNE, 3****Assistant-in-Dispensing**

Applications are invited for the above post in the Pharmaceutical Department. Salary within the range of £175 at age of 16, rising to £395 at age of 22, rising to a maximum of £535, plus £50 qualifying allowance for persons over the age of 18 years holding an appropriate qualification. Applications, stating age, education, and experience, to be addressed to the undersigned at the above address. G. E. FORD,
Group Secretary.
C 3574

SITUATIONS VACANT**RETAIL (HOME)**

DARTFORD. Pharmacist required for dispensing duties at central pharmacy, also for relief at one branch. Applications in writing stating full particulars and salary required to: Superintendent Pharmacist, Dartford Co-operative Chemists, Ltd., 93 Kent Road, Dartford. C 3573

EASTBOURNE. Unqualified assistant required, experienced in dispensing. Comfortable, permanent. Meyrick & Davics, Ltd., 149 Terminus Road, Eastbourne. (Phone: 4810.) C 3581

EXPERIENCED dispensing unqualified assistant required. Apply Trimming, Willis & Co., Ltd., 49 High Street, Alton, Hants. C 3577

PHARMACIST. A Relief Branch Manager Pharmacist required for a permanent position with the Society. Excellent conditions. Applications in writing stating full details of age, experience, salary required to the Personnel Manager, Co-operative, 110 Fratton Road, Portsmouth. C 3556

PHARMACIST wanted as relief Manager. Permanent post with prospects, in pleasant part of Hertfordshire. Unfurnished modern flat available if required. Able to drive an advantage. Full details at interview. Apply to E. E. Russell (Chemists), Ltd., 42 Whitehorse Street, Baldock, Herts. (Phone: Baldock 3345.) C 3568

TOTTENHAM. Experienced lady counter assistant required, preferably with some dispensing experience. Good salary and congenial working conditions. Apply Mr. MacPhee, E. C. Pricc, Ltd., 804 High Road, Tottenham, N.17. (Phone: TOTtenham 1974.) C 3580

YOUNG MAN REQUIRED by leading photographic dealers. Some experience desirable. Good prospects. Write: Manager, "City Sale," 64 Cheapside, E.C.2. C 3569

PFIZER LIMITED

The Ethical Pharmaceutical Sales Division of Pfizer Limited has a number of vacancies for the right men to act as

Medical Representatives

in the North of England, to promote the Department's products to the Medical and Pharmaceutical professions. Applications from gentlemen aged 25 to 35 are invited.

Candidates should possess:—

- A good education.
- A Pharmaceutical qualification or a good Medical and Pharmaceutical background.
- Proven or latent ability to sell in this field.
- A sincere desire to work hard and progress in an expanding organisation.

In return the successful candidates will be offered:—

- A good basic salary and incentive bonus.
- Payment of all business expenses.
- Company car.
- Comprehensive training.
- Participation in generous non-contributory Pension and Life Assurance Schemes.
- Removal Expenses if necessary.

Written applications quoting Ref. WS/CD and giving details of background, education and career to date should be sent to the

Personnel & Training Officer (Sales Divisions),
Pfizer Ltd., Sandwich, Kent



C 6462

REPRESENTATIVES

An opportunity exists for suitably qualified gentlemen to join an International Pharmaceutical Company as:—

PHARMACEUTICAL REPRESENTATIVES

in territories centred on Birmingham and Nottingham. These gentlemen would sell ethical pharmaceutical products of the Company to Retail Chemists. Candidates who have a sound education and experience of selling, preferably to Retail Chemists, are invited to apply. Some knowledge of current ethical pharmaceutical products would be an advantage.

A comprehensive training scheme is operated by the Company and full support given to Representatives' activities.

An attractive starting salary is offered and all business expenses paid. This Company operates non-contributory Pension and Life Assurance Schemes and housing assistance can be given.

Fully detailed applications are invited from gentlemen of good education and integrity, aged between 25 and 35. These should be addressed to the Advertiser, Box C 6457, quoting Ref. CD.

M&B**DEVELOPMENT
PHARMACIST****MAY & BAKER LTD DAGENHAM ESSEX**

require a graduate in Pharmacy in their Pharmaceutical Development Laboratories. The work entails the development of new formulations and manufacturing processes. It is an interesting post which affords scope for originality and the application of scientific principles.

Applicants should hold a recognised pharmaceutical qualification and be not more than 30 years of age. Some experience in the above type of work would be an advantage.

Commencing salary in the range £800—£1,250 p.a. There is a Life Assurance Scheme and Pension Fund in operation.

Apply initially in writing to the

Personnel Officer, quoting Reference No. CD/193/60.

C 6455

**Ghana
Branch Manager**

A leading Pharmaceutical Company invites applications from pharmacists to fill a progressive position as Manager of their new branch organisation in Tema.

The successful applicant, within the age group 28/35, will have gained wide sales and administrative experience in the promotion of medical products for preference but experience in allied fields would be an advantage. A training course in the United Kingdom will precede the appointment.

Applicants should submit full details of career and qualifications, together with a recent photograph, to Box C 6454.

Situations Vacant—Continued**WHOLESALE****ABBOTT LABORATORIES, LTD.,**

wish to appoint a Deputy to the Manager of the Pharmaceutical Development Laboratory concerned with the formulation of new products. The candidate should possess a pharmaceutical qualification and have had experience in production or preferably development work. The position offers excellent prospects to the right person and the Company have many employment benefits. The appointment will be in the North-east until about October of this year when all activities of the Company will be transferred to new laboratories in Kent. Please apply, giving full details of age, education and career to date, to:

**The Secretary,
Reference H.L.,**

**ABBOTT LABORATORIES, LTD.,
Bede Trading Estate,
Jarrow-upon-Tyne,
Co. Durham.**

C 6456

COTON LODGE HONEY FARMS, makers of honey and other new products, require salesmen for East and West Midlands. Applicants must have knowledge of grocery and/or pharmaceutical markets. Products nationally advertised. Salary and commission. Car provided and expenses paid. Full details of age and experience in confidence to Coton Lodge Honey Farms, Old Water Mill, Desborough, Northants.

C 6463

EXECUTIVE, 30/35, with intimate knowledge buying and selling pharmaceutical chemicals or essential oils, required by well-known London company to establish new department. Opportunity for investment and eventual promotion to Board. Replies in confidence to Box C 6392.

**C I B A
VETERINARY REPRESENTATIVE**

CIBA Laboratories Ltd. invite applications for the post of Veterinary Representatives in South-East England. Candidates must have had previous experience in selling ethical veterinary preparations, preferably in the South-East. This is a first-class opportunity to join a rapidly growing department and further promotion would follow for the right man who could prove his ability by results. Good salary, pension scheme and Company car provided.

Application forms can be obtained from:—

**Veterinary Products Manager,
CIBA Laboratories, Ltd.,
Horsham, Sussex.**

C 6458

LONDON. Stocktakers required by very old-established firm. Excellent conditions and good remuneration. Must be prepared to travel when necessary. All expenses paid. Previous experience an advantage but not essential. Apply Box C 6451.

SALES REPRESENTATIVE required for existing territory in Greater London area servicing retail pharmacies and doctors with drugs, galenicals, tablets, ethicals, etc. Remuneration will be by salary and incentive bonus. Car provided and expenses paid. Full details in confidence should be sent to C.G.P., Willows Francis, Ltd., 73/75 Shacklewell Lane, Dalston, E.8.

C 6467

SUPERINTENDENT PHARMACIST required to take over pharmacy in Alnwick, Northumberland, specialising in veterinary products. The position would suit young selling chemist with an agricultural background or interests. Ability to enthusiastically impart product knowledge to non-technical sales staff essential. Contributory life assurance/pension scheme. Car provided. Applications to: Northern Farmers' Trading Association, Ltd., 12 Westmorland Road, Newcastle upon Tyne, 1.

C 3553

PILL COATER required, also to assist in the manufacture of medicinal preparations, and light duties. Hours 8.30-5 p.m. No Saturdays. Apply to George Eade, Ltd., 232 Goswell Road, E.C.1.

C 557

**WORKS' CHEMIST
REQUIRED**

Excellent opportunity for a Pharmacist offering interesting work, good prospects and a salary commensurate with qualifications and experience. Applications will be treated in strict confidence and should give full details of age, training and career to date.

**WIGGLESWORTH LIMITED,
WESTHOUGHTON,
BOLTON, LANCs.**

C 6459

Situations Vacant—Continued

MALE PHARMACIST

PARKE, DAVIS & COMPANY

An opportunity of an attractive career exists in the Medical Service Department for a male pharmacist, aged 25-30, preferably a graduate with a keen interest in pharmacology and therapeutics. Duties will include the handling of a wide range of technical queries and the compilation of medical literature on the Company's products. The successful candidate will later take part in the training of medical representatives.

Salary will be commensurate with age, qualifications and experience and will be progressive.

5-day week. Superannuation Scheme. Staff Restaurant.

Write in the first instance for an Application Form to:

Mr. A. L. Glover,
Personnel Manager,
Parke, Davis & Company,
Staines Road,
Hounslow,
Middlesex.

C 6444

WHOLESALE chemists' sundries department. Male and female staff required for the following positions: Order office clerks (typists), order assemblers, despatch checkers. General experience of chemists' sundries is required. Excellent opportunities for those with wide experience and all-round ability. Apply: The Manager, Unichem Limited, Westbury Road, Walthamstow, E.17. C 6465

YOUNG TRAVELLER required for well-known toilet preparation manufacturers. Must be mobile to go anywhere in the United Kingdom and be prepared to work hard. Apply giving full details of past experience, salary required to Box C 6430.

AGENTS WANTED

A **PROGRESSIVE FIRM** of importers engaged in national distribution of a small range of fast selling goods suitable for sale to wholesale hardware and smallware merchants invite applications from agents currently doing business with these outlets in the following areas (1) Warwicks, Worcs, Staffs; (2) Notts, Leics, Derbys, Lincs, Northants; (3) Somerset, Devon, Cornwall; (4) East Anglia and Home Counties. Payment is by way of commission only, and earnings of current sales staff vary between £80 and £100 per month. Only those with long standing connections should apply giving full particulars of age, etc., and stating area in which interested, to Managing Director, Box C 3576.

AGENTS already having connection with chemists and grocers in Lancashire and Yorkshire, required to sell, on generous commission basis, an infants' teething syrup and a soothing mixture. Supporting advertising given in agreed areas. Box C 3578.

EXCLUSIVE AGENCY

For the U.K. and some Dominions offered for remarkable Swiss cosmetic speciality. Only first-class firms. Write in first instance to Box C 3572.

BUSINESS OPPORTUNITIES

BACKER OR WOULD SELL mail order selling gadget for facial grooming. Another for muscle lifting. Complete with cosmetic preparations as daily home routine service. Scope for agencies throughout United Kingdom. Box C 3571 or phone Paddington 9586.

TABLET with potential of millions a week needs finance with partnership or would sell outright or on royalty basis. Box C 3570.



THE DISTILLERS COMPANY LIMITED

OVERSEAS MEDICAL REPRESENTATIVES

The Distillers Company (Biochemicals) Limited, a subsidiary of The Distillers Company Limited, wish to appoint several Overseas Medical Representatives to operate in the following territories:

EAST AFRICA

WEST AFRICA

The Company manufactures a wide range of antibiotics and pharmaceuticals which it sells in overseas markets through sole importers and distributors.

Candidates, aged between 30 and 40, should preferably be pharmacists, and previous experience as a Medical Representative, either at home or overseas, is essential.

An Overseas Representative is directly responsible for ensuring that the sole importers provide suitable distribution facilities throughout his territory for the Company's products, and he promotes their sale by establishing and maintaining close contacts with actual and potential users.

Successful applicants will receive training in the United Kingdom before taking up their overseas posts. Tours of duty vary according to territory. Generous home leave is granted on completion of a tour of duty.

Salary will be in accordance with qualifications and experience and a car is provided. The Company operates a non-contributory pension scheme.

Write:
STAFF MANAGER
THE DISTILLERS COMPANY LIMITED
21/22 BOLTON STREET
LONDON, W.1.

Quote Ref: 23/61 C.D.

C 6429

ARGENTINA

British manufacturers of fine and heavy chemicals and pharmaceutical specialties interested in establishing or expanding their market in the Argentine, are invited to contact important Argentinian concern with capital, plant and technical resources. Director visiting London late April. Box C 6419.

SAVE TAX, limit your liability. Brand new limited companies available immediately. Ready to trade today. Cost: £20 (everything inclusive). Companies also formed to order: £10 10s. (excluding duty). Wildman & Battell, Ltd., 13 Well Court, E.C.4. CITY 2545. C 3551

U.S.A. URGENTLY NEEDS NEW PRODUCTS, FORMULAE, INVENTIONS. Leading U.S. specialist firm launched 800 campaigns, 792 made profits and grossed \$350 millions. We can handle entire finance and manufacturing also. Discuss your product or formula new to U.S.A. with U.K. director: G. Welch, 17 Queen's Gate Gardens, S.W.7. Kni. 5679. C 3494

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WE WILL PURCHASE for cash a complete stock, a redundant line, including finished or partly finished goods, packing raw materials, etc. No quantity too large. Our representative will call anywhere. Write or telephone: Lawrence Edwards & Co., Ltd., 6/7 Wellington Close, Ledbury Road, London, W.11. Tel.: Bayswater 4020 and 7692. C 140

LARGEST CASH BUYERS. Goods of every description. Whole or part shop stocks purchased, also soiled or miscellaneous goods. Our buyers will call for large or small quantities, distance no object. Write or phone: C. & R. Strong, Ltd., 29 Toynbee Street, London, E.1. Phone: Bishopsgate 6066. C 3549

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SPEARS,
(Dept. D.), Watling Street, Shudehill,
Manchester.
Phone: Blackfriars 9432 (5 lines)
Bankers: Midland Bank, Ltd.

C 438

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20% DISCOUNT FOR CARPETS, etc. — British and Oriental — Axm. or Wilton — Broadloom or fitted. Usual guarantees. Warehouse selection. Free delivery. Write for introduction card to Manchester or London showrooms: Gekay Carpet Suppliers, 754 Rochdale Road, Royton, Lancs. C 3526

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QUIET AND ACCURATE workmanship. Over 30 years' practical experience. Detailed inventories supplied to suit your individual requirements. Your own stock sheets priced. Terms moderate. C. W. Playfoot, 8 Aylward Road, London, S.W.20. Phone: Liberty 4104. C 520

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RAINHOODS 36/- per gross, tax paid, samples available. S.A.E. please. Linen Market, 121 Oldham Street, Manchester. C 3555



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